

EXHIBIT A



Mr. Lance Nyman
Lead Contracting Officer
US Department of Energy, NNSA
Savannah River Site Office
P.O. Box A
Aiken, SC 29802

29 September 2016

DCS-DOE-005426
Response Required: Yes
Response Due: 30 NOV 16

SUBJECT: Contract No. DE-AC02-99CH10888, MOX Fuel Fabrication Facility Project, Certified Claim for Incentive Fee, C 16-0003

Reference: (1) MOX Services Letter DCS-DOE-004882, dated 25 June 2015
(2) NNSA Letter NA-APM-16-0098, dated 09 March 2016

Dear Mr. Nyman:

Pursuant to 41 U.S.C § 605(c) and Federal Acquisition Regulation (FAR) 52.233-1 Disputes Alternate I, CB&I AREVA MOX Services, LLC (MOX Services) hereby submits a certified claim in the amount of \$56,427,767.00 for suspended incentive fee payments and interest accrued under the subject contract.

If you have any questions, please feel free to contact the undersigned at (803) 819-8654.

Sincerely,


Paul Whittingham
Contracts Manager

~~DOCUMENTS TRANSMITTED~~
~~CONTAIN ORO INFORMATION~~

Attachment: C 16-003 Incentive Fee Claim

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C 16-003

INCENTIVE FEE CLAIM

*Contract DE-AC02-99CH10888
29 September 2016*

**DOES NOT CONTAIN OFFICIAL USE ONLY
INFORMATION**

Name/Org: S.Townsend/MOX Services Date: 02Nov17

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~~May be exempt from public release under the Freedom of Information Act (5 U.S.C. 552),
exemption number and category: Exemption 4 - Commercial/Proprietary~~

~~Department of Energy review required before public release.~~

~~Name/Org: Paul Whittingham / Contracts Manager~~

~~Date: 29 September 2016~~

~~Guidance (if applicable): N/A~~

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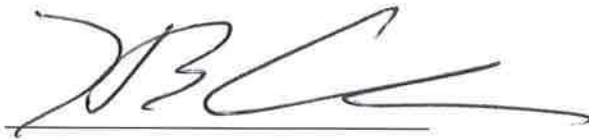
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<p style="text-align: center;">OFFICIAL USE ONLY</p> <p>Exempt from public release under the Freedom of Information Act (5 U.S.C. 552), exemption number and category: <u>Exemption Number 4 – Commercial/Proprietary</u></p> <p>Department of Energy review required before public release.</p> <p>Name/Org: <u>Paul Whittingham / MOX Services</u> Date: <u>29 September 2016</u> Guidance (if applicable): <u>N/A</u></p>
<p style="text-align: center;">DOES NOT CONTAIN OFFICIAL USE ONLY INFORMATION</p> <p>Name/Org: <u>S.Townsend/MOX Services</u> Date: <u>02Nov17</u></p>

CERTIFICATION OF CLAIM

I, Henry B. Chavous, make the following certification with respect to MOX Services' claim of entitlement to \$52,890,019 in suspended Incentive Fee, and \$3,537,748 in interest, under Option 1 of Contract DE-AC02-99CH10888.

I certify that the claim is made in good faith; that the supporting data are accurate and complete to the best of my knowledge and belief; that the amount requested accurately reflects the contract adjustment for which the contractor believes the Government is liable; and that I am duly authorized to certify the claim on behalf of the contractor.



Henry B. Chavous
CB&I AREVA MOX Services, LLC



Date

I. EXECUTIVE SUMMARY

CB&I AREVA MOX Services, LLC (“MOX Services”) submits this Certified Claim (“Claim”) under Option 1 of contract DE-AC02-99CH10888 (the “Contract”) for the construction of the Mixed Oxide (“MOX”) Fuel Fabrication Facility (“MFFF” or “Project”). MOX Services claims that the U.S. Department of Energy (“DOE”)/National Nuclear Security Administration (“NNSA” or “Agency”) owes MOX Services a total of \$56,427,767, which includes \$52,890,019 in suspended incentive fee and \$3,537,748 in interest, that is immediately due and payable, as summarized in the chart below.¹

Description	Amount
FY2011 Incentive Fee Payments	\$ 15,400,000
FY2012 Incentive Fee Payments	14,500,000
FY2013 Incentive Fee Payments	9,500,000
FY2014 Incentive Fee Payments	8,490,019
FY2015 Incentive Fee Payments	5,000,000
Total Incentive Fee Payments Outstanding	\$ 52,890,019
Total Interest Due	\$ 3,537,748
Total Incentive Fee Payments with Interest	\$ 56,427,767

For the period FY2008 to FY2015, MOX Services is entitled to incentive fee payments for every quarter in which its performance is within contractual cost and schedule parameters. Beginning in the first quarter of FY2011, NNSA wrongly suspended all incentive fee payments, despite MOX Services’ adherence to the requirements for earning these fees.

As for costs, MOX Services meets the incentive fee requirements for every quarter in which the EAC is less than the estimated value of CLIN 002, or “Target Cost,” plus the applicable Cost Incentive Fee Band amount. As of the October 2012 project rebaselining effort, the estimated cost of CLIN 002 was known and should have been increased consistent with the 2012 Rebaseline EAC. NNSA validated this EAC by requiring MOX Services to report progress according to it. Since the 2012 Rebaseline, NNSA actions, particularly with

¹ See Schedules 1.0 and 1.1, which show the incentive fee payments and interest calculations.

respect to funding levels and the uncertainty of out-year funding, have prevented MOX Services from reliably updating that EAC.

For incentive fee entitlement purposes, the estimated cost of CLIN 002 should have been set at the EAC plus any remaining Management Reserve through the normal contract administration process. Thus, as of the 2012 Rebaseline the EAC was below the combined estimated cost of CLIN 002/Target Cost and the Cost Incentive Fee Band. Accordingly, MOX Services was eligible to receive all suspended incentive fee payments that had accrued to that date, and was entitled to continue receiving quarterly incentive fee payments so long as the EAC remained within the incentive fee parameters.

For at least three reasons MOX Services currently is within the incentive fee cost parameters. *First*, absent a new validated EAC, the 2012 Rebaseline EAC is still the one that must be compared to the estimated cost of CLIN 002 for incentive fee entitlement purposes. As the estimated cost of CLIN 002 has increased due to changes in work scope and/or cost overruns while the EAC to which it is compared has been fixed, the EAC must now be below the sum of Target Cost and Management Reserve. *Second*, if the EAC is deemed to have increased (without reliable quantification) since the 2012 Rebaseline, it has done so in tandem with the estimated cost of CLIN 002/Target Cost. As the EAC increases, so does the Target Cost, thus MOX Services' cost performance must be within the Cost Incentive Fee Band. Indeed, at the end of MFFF construction, by definition the EAC will equal the estimated cost of CLIN 002/Target Cost. *Third*, to the extent that estimated costs have increased since the initial Option 1 Baseline in 2007, it has done so overwhelmingly due to government-caused actions and inactions that constitute actual and constructive changes under the Contract's changes clause. In these circumstances, the Target Cost must be adjusted to account for the changes in amounts that place MOX Services' performance within the Cost Incentive Fee Band.

As for schedule, MOX Services is within the Schedule Incentive Fee Band when the schedule is appropriately adjusted to account for actual and constructive changes. Specifically, the Project schedule and the Period of Performance must be adjusted due to changes associated with equipment procurements and funding reductions, or, alternatively, with the immature designs at the time of estimating. With these adjustments, MOX Services is entitled to receive all outstanding incentive fee payments under the Schedule Incentive Fee Band.

This Claim sets forth the legal and factual bases as to why MOX Services currently is entitled to the payment of all suspended incentive fees. In addition to the contractual analysis of the incentive fee provisions outlined above, this Claim documents out-of-scope work and other changes that have increased cost and extended the Project schedule. Examples of the changes include: (i) the basis and assumptions on which MOX Services estimated the cost and schedule to procure, fabricate and assemble the process units; (ii) the basis on which MOX Services estimated the costs to construct the MFFF; (iii) the method of construction performance whereby MOX Services initially was to perform only as a construction manager before NNSA changed strategy and allowed MOX Services to self-

perform significant aspects of the Contract; and (iv) NNSA funding reductions and direction to slow down the Project and NNSA's failure to provide a Project funding profile, which prevented MOX Services from planning the Project effectively and efficiently to completion.

A. Introduction

DOE and NNSA have strictly controlled the timing, performance and funding of the Project from the time the Contract was signed in 1999. The MFFF Project resulted from the Plutonium Management and Disposition Agreement ("PMDA") between the United States and Russia in which each country agreed to dispose of significant amounts of weapons-grade plutonium. Instead of directing the Project in the most efficient and cost effective manner, on many occasions DOE has based its Contract direction on political considerations that have increased the Project's cost and schedule.

The Project has been politically charged from the beginning. Internationally, the PMDA calls for the Russian and American plutonium disposition programs to proceed roughly in parallel. On multiple occasions, DOE has slowed down the Project so as not to get ahead of the Russian program. For example, until certain aspects of the Russian implementation of the PMDA were settled in the mid-2000s, DOE severely limited MOX Services' access to, and information allowed to be shared with, potential process unit subcontractors in order to prevent the impression that the programs were no longer tied.

On the domestic political front, the State of South Carolina agreed to accept weapons-grade plutonium at the Savannah River Site ("SRS") only on the condition that DOE implement a disposition strategy for removing it, preferably through the construction of the MFFF, which would create thousands of jobs in the State. By the time a major delay in the Russian MOX program was resolved, the plutonium had been stored at the SRS for years, and, from South Carolina's perspective, DOE had not held up its end of the bargain. Even though at that point the relevant designs were not sufficiently mature to support accurate estimating, in an attempt to make up for lost time DOE directed MOX Services to prepare the MFFF construction cost and schedule estimates. It was against these prematurely developed estimates that MOX Services' entitlement to incentive fee would be determined. More recently, NNSA has drastically cut Project funding. These decisions have severely impacted Project cost and schedule.

Before exercising Option 1, DOE recognized that these largely political risks (*e.g.*, parallelism with the Russian program and funding) could significantly impact Project costs and schedule. Moreover, these risks were completely outside MOX Services' control. Because the potential impact of these risks was so great and the likelihood of their realization was unknowable, instead of including these risks in Project cost estimates, DOE excluded them from the scope of the Contract. Events related to parallelism with the Russian program and funding have severely impacted the Project.

Moreover, after Russia settled on a similar technological approach to meeting its PMDA obligations, hurdles arose regarding the liability protocol that would govern Russia's

use of the technology. The delay engendered by these negotiations caused NNSA to direct MOX Services to submit its MFFF construction cost and schedule estimates at a time when the equipment designs were insufficiently mature to support the estimating function, even under the prevailing DOE requirements. The under-informed estimates that resulted did not anticipate the tremendous complexity of the Project, and fell far short of the funding and time that would be needed. MOX Services cannot be held responsible for the deficiencies in the estimates that were caused by the government. Accordingly, the cost and schedule estimates on which MOX Services' entitlement to incentive fee was based must be adjusted to account for the added complexity.

Further, in an effort to save money, NNSA decided to direct the construction performance strategy. Instead of allowing MOX Services to select the construction performance strategy it judged best, NNSA directed MOX Services to subcontract all the construction work on a competitive fixed-price basis. NNSA presumed that competition would drive down subcontractors' bids and that the fixed-price nature of the subcontracts would control potential cost overruns. NNSA's strategy ultimately failed because of a lack of qualified and willing subcontractors, and had to be abandoned. Modification 152 finally recognized a formal change in strategy. NNSA's failed strategy increased costs significantly.

In January 2012, NNSA directed MOX Services to prepare a rebaseline proposal. MOX Services submitted a Baseline Change Proposal in September 2012, which contained the same costs and schedule as the October 2012 MOX Project Rebaseline Proposal.²

While NNSA agreed with the basic tenets of the 2012 Rebaseline and has directed MOX Services to use it for reporting purposes, neither NNSA nor DOE has acted on the proposal to increase the congressional baseline or the estimated cost of CLIN 002/Target Cost. Many events have transpired since the 2012 Rebaseline, including funding reductions that have impacted MOX Services' cost and schedule, and these have defeated the ability to identify the parameters for determining entitlement to incentive fee.

The Contract entitles MOX Services to incentive fee payments for every quarter it is "projected to be below the total estimated Cost of CLIN 002, and schedule."³ In connection with the 2012 Rebaseline, both the estimated cost of CLIN 002 and the Project schedule were adjusted for reporting purposes, indicating that at the time MOX Services was projected to be below the estimated cost of CLIN 002 and the Project schedule. Since then, NNSA has reduced funding and has failed to provide a funding profile to Project completion, making further estimate at completion ("EAC") comparisons and schedule performance evaluations

² Where distinctions between Baseline Change Proposal 12-121 ("BCP 12-121") and the October 2012 Rebaseline Proposal are important, this Claim will cite to the specific document as appropriate. Otherwise these documents will be referred to collectively as the "2012 Rebaseline."

³ Contract DE-AC02-99CH10888 at J.7.2 ("Contract"). ("Exhibit 1").

impossible. In these circumstances, MOX Services is entitled to the full payment of the contracted incentive fee.

Additionally, after the 2012 Rebaseline, NNSA repeatedly reduced the Project's funding, forcing MOX Services to change its work plan. Beginning in April 2013, NNSA reduced funding levels for FY14, which resulted in personnel reductions, restrictions of overtime, procurement deferrals, and significantly slowed progress on the Project. NNSA also failed to provide a funding profile for future years, making it impossible to plan the Project to completion, and to develop a full Project schedule or a true EAC. But if such calculations were possible the appropriate adjustments would be such as to bring MOX Services' performance within the parameters that entitle it to the full incentive fee.⁴

The major sections of this Claim are as follows.

- I. Executive Summary
- II. Contract Background
- III. Process Equipment Changes
- IV. Change in the Method of Construction Performance
- V. Design Immaturity of the Project at Time of Estimating
- VI. Incentive Fee Payments

Cost and schedule growth exists that is not part of this Claim. For example, this Claim only addresses Option 1 and does not include any changes under the Base Contract. Award fee changes are also not included in this Claim. MOX Services reserves the right to seek additional fees related to matters discussed here, and for other matters not included in this Claim. To the extent that this Claim overlaps with other outstanding Claims or Baseline Change Proposals ("BCPs") on which NNSA has failed to act, this Claim shall take precedence.

B. Change in Scope Associated with Process Unit Procurement

The PMDA requires the Project to proceed in rough parallel with the Russian MOX Program. Because risks associated with the requirement for parallelism with the Russian Program were beyond MOX Services' control, and the potential impacts were not known, such risks were accepted by NNSA, and were explicitly placed beyond the scope of the Contract.

⁴ As MOX Services cannot develop a Project schedule and EAC, or plan the Project to completion due to the lack of a funding profile for future years, the Project is continuing to experience delay and disruption, which cannot yet be fully quantified.

Beginning in 2003, MOX Services repeatedly requested authorization to conduct pilot procurements and establish Basic Ordering Agreements (“BOA”) with vendors to validate certain key assumptions surrounding the process units, including the constructability of the French reference plant designs; the existence and interest of capable manufacturers to design, fabricate and test the process units; and the likely costs and schedule of the procurements. At every turn, DOE refused to allow MOX Services to conduct procurement activities or actions because the Russian MOX program was stalled.

Because no procurement activities or actions were conducted, MOX Services was not able to validate its assumptions prior to providing its estimate of process unit costs and schedule in the Option 1 proposal. MOX Services was forced to estimate process unit costs and schedule using estimating methodologies that proved unsuitable to the effort. As a result, the discrete costs associated with manufacturing the units, such as fabrication and assembly costs, were substantially underestimated.

Moreover, from the time of the 2007 Baseline until the fall 2012 Rebaseline, delays in the process unit procurement cycle controlled the Project’s critical path. By the 2012 Rebaseline, the process units were delayed over 1100 calendar days, pushing back the estimated completion of Option 1 substantially. Accordingly, the Project’s hotel load costs, which were impacted by the delays, too, were substantially underestimated.

The process unit cost and schedule underestimates were a direct result of the DOE’s refusal to authorize MOX Services to engage potential vendors and to conduct pilot procurements prior to the start of Option 1. DOE based its refusal on the necessity of maintaining parallelism with the Russian MOX program, a risk NNSA explicitly accepted. Therefore, MOX Services is entitled to an adjustment of the Target Cost/estimated cost of CLIN 002, and to an adjustment to the schedule, to reflect the increased costs and delay caused by DOE’s refusal to authorize pilot procurements. These additional costs, estimated as of the 2012 Rebaseline proposal with Addendum, were nearly \$1.3 billion. The required schedule adjustment totals over three years.

C. Change In Construction Strategy

NNSA’s original construction performance strategy directed MOX Services to serve as the construction manager and to perform the work through fixed-price, competitively bid subcontracts. In fact, the Contract prohibited MOX Services from self-performing any construction. In controlling and directing the construction performance strategy, NNSA accepted the risk that its strategy might fail. Correspondingly, this manner of performance was a risk MOX Services expressly excluded from its Option 1 proposal. MOX Services included in its cost estimate a key assumption – that a sufficient number of qualified subcontractors would be willing and able to undertake Project construction on a fixed-price basis.

Ultimately, NNSA’s construction performance strategy could not be executed without cost increases and unacceptable quality control risks. Given the risks of this first-of-a-kind construction Project under a licensing process strictly regulated by the Nuclear Regulatory

Commission (“NRC”), few construction subcontractors were willing to bid for the work on a fixed-price basis, and most were not qualified to undertake it. As a result, NNSA abandoned the failed strategy and ultimately issued Modification 152 which recognized the change in the method of construction performance. The modification removed the Contract’s prohibition on self-performing construction work and the requirement to subcontract all construction work on a competitive, fixed-price basis. As of the 2012 Rebaseline, MOX Services expects to self-perform significant construction scope, including, among other things, piping and electrical work. In short, Modification 152 acknowledged that NNSA’s original strategy had proven unworkable.

As a result of NNSA’s failed construction performance strategy and subsequent change thereto, MOX Services is entitled to an adjustment of over \$250 million in the estimated cost of CLIN 002/Target Cost. These cost increases are principally associated with increases in construction management scope and increased Quality Assurance/Quality Control (“QA/QC”) resources necessary to provide support to vendors.

D. Increased Facility Construction Costs Due To Design Immaturity Of The Project At The Time Of Estimating

Due to external international and domestic political pressures, NNSA required MOX Services to create and submit its Option 1 cost estimates before the designs were sufficiently mature to support the preparation of accurate estimates. At the time of the estimates, MOX Services was reporting that the critical process unit designs were little more than half complete, and NNSA knew that much of the design was too immature to provide a basis for accurate estimates.

NNSA’s rush to have estimates in hand stemmed from political pressure exerted by South Carolina’s elected officials. Years before, South Carolina had agreed to accept weapons-grade plutonium at the Savannah River Site on the condition that the federal government implement a disposition strategy for it, preferably involving construction of the MFFF. While an impasse over Russia’s implementation of the PMDA stalled the U.S. MOX Project, DOE directed MOX Services to focus on achieving a design licensable by the NRC, with only token regard for constructability or the design’s ability to generate accurate estimates. When the U.S.-Russian impasse was broken, South Carolina’s federal and state elected officials, long frustrated by events beyond their control, understandably were eager for DOE to begin the construction contracting process and break ground on the MFFF, regardless of whether MOX Services was in a position to reasonably estimate the costs.

Constructing the first-of-a-kind, highly complex MFFF proved more resource- and time-intensive than anyone could have anticipated, given the largely incomplete designs. As the facility and process unit designs advanced, it became clear that the Option 1 cost and schedule estimates for bulk commodities, mechanical equipment and materials and associated craft labor were far too low, as were the associated Title III engineering costs.

As of the 2012 Rebaseline with Addendum, MOX Services estimated that the Project would experience more than \$1 billion in facility construction related cost growth over the

2007 Baseline estimates. MOX Services is entitled to an adjustment in the estimated cost of CLIN 002/Target Cost in at least this amount, and to an extension of the schedule.

Moreover, this design immaturity/unknown complexity theory operates as a supporting and alternative theory of recovery to the process unit-specific underestimates and the change in method of performance theories. If the cost growth that is tied to these more specific theories is deemed to be insufficient to bring MOX Services' performance within the parameters that entitle it to the full contractual incentive fee, the design immaturity theory encompasses such underestimates as well.

E. Estimate At Completion Used In The Claim

NNSA's reductions in Project funding and elimination of any funding profile for future years have left the Project in limbo, making it impossible to effectively and efficiently plan the work or estimate cost and schedule at completion. The Project currently stands without a reliable schedule to completion or EAC against which to measure cost and schedule impacts. Thus, this Claim uses the last full EAC used for reporting in the Earned Value Management System ("EVMS") and contained in MOX Services' 2012 Rebaseline Proposal to measure impacts at that point in time.

The October 2012 Rebaseline Proposal updated the cost and schedule projections based on the NNSA-specified funding profile. MOX Services estimated a new completion date of November 30, 2018, excluding contingency. A corresponding schedule was also completed to support the 2018 Project completion date. The estimated cost for CLIN 002 was increased to \$6,352,406,548. This amount included \$6,041,144,702 in estimated costs and \$311,261,846 in Management Reserve. The cost estimate was based on actual costs incurred through May 2012 and an estimate of costs to be incurred through FY18. As directed by NNSA, MOX Services utilized the 2012 Rebaseline to report status in Monthly Status Reports and EVMS. MOX Services incorporated an Addendum to the 2012 Rebaseline that increased its estimated costs of CLIN 002 by \$285,916,668 to \$6,638,323,216.⁵

This Claim utilizes the 2012 Rebaseline Proposal to define scope changes and to measure corresponding cost increases and schedule delay for the sections of the Claim related to changes. It measures the impacts to cost and schedule by comparing the 2007 Baseline versus the 2012 Rebaseline with Addendum for Option 1 work scope. It is reasonable and proper to measure impacts through the 2012 Rebaseline with Addendum because it reflects the last bottom-up EAC reflecting a full funding profile through Project

⁵ The December 2012 PRISM EAC of \$6.328 billion includes the \$6.041 billion for costs for CLIN 0002 and an additional \$287 million for costs not on contract (*e.g.*, Management Area 90 costs). The additional \$285.9 million related to the 2012 Rebaseline Addendum was added to the December 2012 PRISM EAC, which results in an EAC of \$6,614,501,585. Management Reserve is not included in the PRISM EAC. *See* Schedules 1.2 to 1.4 for 2007 and 2012 EAC calculations.

completion. Some adjustments to the EAC have been made since the 2012 Rebaseline EAC, but due to an absence of firm funding commitments these adjustments have not been able to reliably estimate the changes to both schedule and cost.

MOX Services and NNSA agreed in July 2007 to a TPC of \$4.814 billion.⁶ The TPC included a Baseline cost estimate of \$3.650 billion based on actual costs incurred through FY06 and estimated costs through the completion of the Project in FY14.⁷ MOX Services used the 2007 Baseline to measure its performance and the 2007 Baseline was included in its monthly performance reports. The 2007 Baseline was reflected in the Project Execution Plan and, as used in this Claim, was adjusted for the budget allocation request that reallocated original budget between different cost accounts. The 2007 Baseline also reflects the reductions that MOX Services made to their internal estimates. These reductions are referred to as EAC “scrubs” in MOX’s 2008 Management Reserve Recalculation.⁸

Subsequent to the Option 1 definitization, MOX Services and NNSA agreed to a Management Reserve of \$316.5 million in cost. MOX Services allocated this Management Reserve to cost growth and changes recognized between 2007 and 2012. For purposes of this Claim, any allocation of Management Reserve has been eliminated or removed from the calculation of cost growth.⁹

In FY13, NNSA announced additional funding constraints which severely altered the execution of the Project. The funding constraints forced MOX Services to allocate available funding based on differing priorities. This caused scope of work and the related costs to be deferred to accommodate the change in funding. In order to measure the impacts of the post-2012 Rebaseline constrained funding, actual time related costs incurred in FY13, FY14, and FY15 were utilized in the development of REA 15-004 and REA 15-005 associated with the cost growth. MOX Services does not believe there is an overlap with the costs included in other sections of the Claim. However, if it is determined in the future that there is an overlap, MOX Services will make an appropriate adjustment.

⁶ Letter DCS-DOE-002834 from Dave Stinson, Shaw AREVA MOX Services, President and Project Manager, to Clay Ramsey, NNSA, MFFF Federal Project Director (July 20, 2007). (“Exhibit 2”).

⁷ The cost estimate of \$3.650 billion equals the TPC less Management Reserve, contingency, and fee.

⁸ REA 08-008 Option 1 Proposal Management Reserve Recalculation. For purposes of this Claim the EAC “scrubs” are reflected as a bottom line adjustment. (“Exhibit 3”).

⁹ The May 2012 Monthly Report indicated that the remaining Management Reserve was less than \$1 million. (“Exhibit 4”).

**CB&I AREVA MOX Services, LLC.
Incentive Fee Payments Outstanding**

Schedule 1.0

Description	Amount
FY2011 Incentive Fee Payments	\$ 15,400,000
FY2012 Incentive Fee Payments	14,500,000
FY2013 Incentive Fee Payments	9,500,000
FY2014 Incentive Fee Payments	8,490,019
FY2015 Incentive Fee Payments	5,000,000
Total Incentive Fee Payments Outstanding	\$ 52,890,019
Total Interest Due	\$ 3,537,748
Total Incentive Fee Payments with Interest	\$ 56,427,767

Sources:

Contract, Part III, Section J, Attachment 7 at p. J.7.6 (Project / Cost
Incentive Fee Band & Schedule)

CB&I AREVA MOX Services, LLC.
Interest on Incentive Fee Payments Outstanding

Schedule 1.1

Incentive Payment Period	Incentive Fee Payment Amount ⁽¹⁾	Demand For Payment Date ⁽²⁾	Start Date of Interest Calculation ⁽³⁾	Interest Due ⁽¹⁾										Total Interest
				Period Beginning Period End	7/1/2012 - 12/31/2012	1/1/2013 - 6/30/2013	7/1/2013 - 12/31/2013	1/1/2014 - 6/30/2014	7/1/2014 - 12/31/2014	1/1/2015 - 6/30/2015	7/1/2015 - 12/31/2015	1/1/2016 - 6/30/2016	7/1/2016 - 9/30/2016	
Interest Rate					1.750%	1.375%	1.750%	2.125%	2.000%	2.125%	2.375%	2.500%	1.875%	
Q1 FY 2011 Incentive Fee	\$ 3,850,000	10/31/2012	11/14/2012	\$	8,676	\$ 26,106	\$ 33,780	\$ 40,346	\$ 38,605	\$ 40,346	\$ 45,844	\$ 47,729	\$ 17,997	299,430
Q2 FY 2011 Incentive Fee	3,850,000	10/31/2012	11/14/2012		8,676	26,106	33,780	40,346	38,605	40,346	45,844	47,729	17,997	299,430
Q3 FY 2011 Incentive Fee	3,850,000	10/31/2012	11/14/2012		8,676	26,106	33,780	40,346	38,605	40,346	45,844	47,729	17,997	299,430
Q4 FY 2011 Incentive Fee	3,850,000	10/31/2012	11/14/2012		8,676	26,106	33,780	40,346	38,605	40,346	45,844	47,729	17,997	299,430
Q1 FY 2012 Incentive Fee	\$ 3,625,000	10/31/2012	11/14/2012	\$	8,169	\$ 24,580	\$ 31,806	\$ 37,988	\$ 36,349	\$ 37,988	\$ 43,165	\$ 44,940	\$ 16,946	\$ 281,931
Q2 FY 2012 Incentive Fee	3,625,000	10/31/2012	11/14/2012		8,169	24,580	31,806	37,988	36,349	37,988	43,165	44,940	16,946	281,931
Q3 FY 2012 Incentive Fee	3,625,000	10/31/2012	11/14/2012		8,169	24,580	31,806	37,988	36,349	37,988	43,165	44,940	16,946	281,931
Q4 FY 2012 Incentive Fee	3,625,000	10/31/2012	11/14/2012		8,169	24,580	31,806	37,988	36,349	37,988	43,165	44,940	16,946	281,931
Q1 FY 2013 Incentive Fee	\$ 2,375,000	2/1/2013	2/15/2013	\$	-	\$ 12,078	\$ 20,838	\$ 24,889	\$ 23,815	\$ 24,889	\$ 28,280	\$ 29,443	\$ 11,102	\$ 175,335
Q2 FY 2013 Incentive Fee	2,375,000	5/1/2013	5/15/2013		-	4,116	20,838	24,889	23,815	24,889	28,280	29,443	11,102	167,372
Q3 FY 2013 Incentive Fee	2,375,000	8/1/2013	8/15/2013		-	-	15,714	24,889	23,815	24,889	28,280	29,443	11,102	158,133
Q4 FY 2013 Incentive Fee	2,375,000	11/1/2013	11/15/2013		-	-	5,238	24,889	23,815	24,889	28,280	29,443	11,102	147,657
Q1 FY 2014 Incentive Fee	\$ 2,122,505	2/3/2014	2/17/2014	\$	-	\$ -	\$ -	\$ 16,435	\$ 21,283	\$ 22,243	\$ 25,274	\$ 26,313	\$ 9,922	\$ 121,470
Q2 FY 2014 Incentive Fee	2,122,505	5/1/2014	5/15/2014		-	-	-	5,684	21,283	22,243	25,274	26,313	9,922	110,719
Q3 FY 2014 Incentive Fee	2,122,505	8/1/2014	8/15/2014		-	-	-	-	16,050	22,243	25,274	26,313	9,922	99,801
Q4 FY 2014 Incentive Fee	2,122,505	11/3/2014	11/17/2014		-	-	-	-	5,117	22,243	25,274	26,313	9,922	88,869
Q1 FY 2015 Incentive Fee	\$ 1,250,000	2/2/2015	2/16/2015	\$	-	\$ -	\$ -	\$ -	\$ -	\$ 9,752	\$ 14,884	\$ 15,497	\$ 5,843	\$ 45,976
Q2 FY 2015 Incentive Fee	1,250,000	5/1/2015	5/15/2015		-	-	-	-	-	3,348	14,884	15,497	5,843	39,572
Q3 FY 2015 Incentive Fee	1,250,000	8/3/2015	8/17/2015		-	-	-	-	-	-	11,062	15,497	5,843	32,402
Q4 FY 2015 Incentive Fee	1,250,000	11/2/2015	11/16/2015		-	-	-	-	-	-	3,660	15,497	5,843	25,000
Total Interest					\$ 67,377	\$ 218,940	\$ 324,970	\$ 435,010	\$ 458,813	\$ 514,960	\$ 614,743	\$ 655,691	\$ 247,243	\$ 3,537,748

Sources:

(1) Schedule 1.0

FAR 52.232-17

41 USC 7109

Prompt Payment Interest Rate History, Bureau of the Fiscal Service

(2) Demand for payment for FY 2011 and FY 2012 Incentive Fee is based on the date of the Contract Proposal 12-004 (2012 Rebaseline). The remaining Incentive Fee demand for payment is the first business day one month after quarter end.

(3) The start of the interest calculation is the first business day fourteen days after the demand for payment date per Contract section J.7.5.

CB&I AREVA MOX Services, LLC.
MFFF Project Cost Summary by Claim Category

Schedule 1.2

	[A]	[B]	[C] = B - A
Claim Category	2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
Option 1 Contract			
Process Units - Direct	\$ 345,543,884	\$ 858,791,412	\$ 513,247,529
Process Units - Hotel Load	799,014,425	1,612,646,690	813,632,265
MFFF Construction - Title III Engineering	32,948,661	91,265,151	58,316,491
MFFF Construction - Installation/Materials	1,062,600,195	2,204,150,497	1,141,550,303
Construction Management	61,514,495	214,585,261	153,070,766
Quality Assurance	23,023,054	168,879,568	145,856,514
All Other	454,177,767	413,432,801	(40,744,966)
Option 1 Subtotal	\$ 2,778,822,480	\$ 5,563,751,381	\$ 2,784,928,901
Base Contract	\$ 872,066,279	\$ 1,050,750,205	\$ 178,683,926
MFFF Project Total	\$ 3,650,888,759	\$ 6,614,501,585	\$ 2,963,612,827

Sources:

Schedule 1.31

CB&I AREVA MOX Services, LLC.
MFFF Project Cost by Management Area

Schedule 1.3

Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
0601.6000	Project Office Operations	Option 1	\$ 6,428,099	\$ 9,225,064	\$ 2,796,965
0601.6001	Communications	Option 1	4,046,177	7,137,056	3,090,879
0601.6002	Special Projects	Option 1	209,586	9,995,270	9,785,684
0601.6003	Employee Incentive Program	Option 1	-	113	113
0601.6004	Project Off-Site Operations	Option 1	2,145,784	11,006,133	8,860,349
0601.6005	Projects Oversight	Option 1	6,630,465	16,667,313	10,036,848
0601.6009	Relocations	Option 1	10,730,106	38,306,079	27,575,973
0602.6010	Project Controls	Option 1	23,119,500	42,470,552	19,351,052
0602.6011	Risk Management	Option 1	891,857	753,578	(138,279)
0603.6020	QA Program Management & Administration	Option 1	1,451,615	1,437,299	(14,316)
0603.6021	Quality Engineering	Option 1	2,718,261	2,861,506	143,245
0603.6022	Audit & Surveillance	Option 1	1,379,395	1,363,028	(16,367)
0603.6023	Quality Control - Labor	Option 1	2,177,354	2,400,403	223,049
0603.6024	QA / QC Assembly Group Support	Option 1	775,405	536,953	(238,452)
0603.6025	MOX Potential Back Charges	Option 1	-	222,526	222,526
0604.6030	PS&A Administrative Support	Option 1	12,594,428	40,294,967	27,700,539
0604.6031	Human Resources	Option 1	15,162,029	25,211,837	10,049,808
0604.6032	Training	Option 1	8,271,079	20,542,206	12,271,127
0604.6033	Information and Personnel Security	Option 1	8,404,946	18,575,630	10,170,684
0604.6034	Record Center	Option 1	7,802,523	14,391,158	6,588,634
0604.6035	Internal Communication	Option 1	(412,642)	134,969	547,611
0604.6036	Accounting, Treasury & Invoice Operations	Option 1	12,049,569	24,577,396	12,527,827
0604.6037	Asset Management	Option 1	359,916	359,715	(201)
0604.6038	Facility Management	Option 1	3,635,905	22,202,181	18,566,276
0604.6039	Facility - Mini-MAC Building	Option 1	-	123,501	123,501
0604.6042	PERC\$	Option 1	-	818,632	818,632
0604.6045	Gateway Project	Option 1	(20,000)	738,370	758,370
0604.6046	Shaw Nuclear Exchange	Option 1	20,000	-	(20,000)
0604.6047	Legal Expenses	Option 1	8,462,852	15,505,975	7,043,123
0604.6048	EMC Corporation Matter	Option 1	1,555	1,557	2
0604.6049	952.204-77 Comp Security	Option 1	873	699	(174)
0605.6040	Contract Management & Administration	Option 1	16,584,091	18,569,434	1,985,343
0606.6050	Procurement	Option 1	3,725,526	8,809,637	5,084,111
0606.6051	Infrastructure Procurement	Option 1	4,192,508	6,141,727	1,949,219
0606.6052	Construction Procurement	Option 1	5,389,184	14,836,392	9,447,208
0606.6053	Process Equipment Procurement	Option 1	8,811,049	16,683,838	7,872,789
0606.6054	Process Unit Procurement	Option 1	433,523	464,936	31,413
0606.6055	Property Management	Option 1	4,412,654	5,335,247	922,593

CB&I AREVA MOX Services, LLC.
MFFF Project Cost by Management Area

Schedule 1.3

Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
0606.6056	Employment Eligibility Verifications	Option 1	2,400	851	(1,549)
0606.6057	Engineered Equipment Group	Option 1	498,087	8,256,992	7,758,905
0606.6058	Procurement Corrective Action NRC Commercial Grade Dedication	Option 1	-	-	-
0606.6059	Procurement Support Services	Option 1	-	4,960,099	4,960,099
0606.6068	S&R and Warehouses	Option 1	-	31,678,298	31,678,298
0606.6069	Materials Management	Option 1	227,994	5,942,192	5,714,198
0607.6060	IT Support	Option 1	9,194,965	47,929,477	38,734,512
0607.6061	IT Other Direct Costs (ODCs)	Option 1	15,366,220	57,883,204	42,516,984
0607.6062	Team Center Initiative	Option 1	1,999,755	2,116,187	116,432
0611.6000	Project Office Operations	Option 1	-	833,463	833,463
0611.6001	Communications	Option 1	-	1,164,936	1,164,936
0611.6002	Special Projects	Option 1	-	1,270,591	1,270,591
0611.6004	Project Off-Site Operations	Option 1	-	1,224,027	1,224,027
0611.6005	Projects Oversight	Option 1	-	1,716,325	1,716,325
0611.6009	Relocations	Option 1	-	1,138,970	1,138,970
0611.6090	Project Systems Assessment - NNSA (OPC)	Option 1	500,002	239,770	(260,232)
0611.6091	EVMS Process Improvements Development ODC (OPC)	Option 1	-	18,475	18,475
0612.6010	Project Controls	Option 1	-	2,913,451	2,913,451
0614.6030	Program Support and Legal Administration	Option 1	-	4,555,007	4,555,007
0614.6031	Human Resources	Option 1	-	493,111	493,111
0614.6032	Training	Option 1	-	3,519,268	3,519,268
0614.6033	Materials Management	Option 1	-	-	-
0614.6034	Record Center	Option 1	-	1,300,316	1,300,316
0614.6036	Accounting, Treasury & Invoice Operations	Option 1	-	2,876,441	2,876,441
0614.6038	Facility Management	Option 1	-	1,507,135	1,507,135
0614.6047	Legal Expenses	Option 1	-	1,665,825	1,665,825
0615.6040	Contract Management & Administration	Option 1	-	2,043,913	2,043,913
0616.6050	Procurement	Option 1	-	721,704	721,704
0616.6051	Infrastructure Procurement	Option 1	-	532,976	532,976
0616.6052	Construction Procurement	Option 1	-	1,654,810	1,654,810
0616.6053	Process Equipment Procurement	Option 1	-	290,251	290,251
0616.6055	Property Management	Option 1	-	1,305,869	1,305,869
0616.6057	Engineered Equipment Group	Option 1	-	569,012	569,012
0616.6059	Procurement Support Services	Option 1	-	412,851	412,851
0616.6068	S&R and Warehouses	Option 1	-	1,319,145	1,319,145
0616.6069	Materials Management	Option 1	-	510,097	510,097
0617.6060	IT Support	Option 1	-	6,586,251	6,586,251
0617.6061	IT Other Direct Costs (ODCs)	Option 1	-	4,239,122	4,239,122

CB&I AREVA MOX Services, LLC.
MFFF Project Cost by Management Area

Schedule 1.3

Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
Subtotal MA 06			\$ 210,374,596	\$ 604,093,287	\$ 393,718,692
1000.8001	Management / Admin	Option 1	\$ 8,574,626	\$ 20,831,188	\$ 12,256,562
1000.8002	Engineering Services Project Controls	Option 1	3,588,904	9,548,015	5,959,111
1000.8003	Engineering Assurance	Option 1	2,053,124	8,647,662	6,594,538
1000.8004	Technical Coordination	Option 1	3,098,008	6,527,963	3,429,955
1000.8005	Document Management	Option 1	819,754	4,442,630	3,622,876
1000.8006	Engineering Training	Option 1	1,861,539	11,783,725	9,922,186
1000.8037	Mechanical – Construction Support	Option 1	-	-	-
1001.8011	Business Travel	Option 1	5,151,516	4,334,579	(816,937)
1001.8012	Temporary Assignments	Option 1	125,319	10,500,723	10,375,404
1001.8019	Other ODCs	Option 1	10,996,389	8,412,830	(2,583,559)
1002.8021	Supervision / Admin	Option 1	1,359,305	1,349,621	(9,684)
1002.8022	Chemical	Option 1	1,040,139	1,096,455	56,316
1002.8023	Mechanical	Option 1	1,073,193	106,284	(966,909)
1002.8024	Laboratory	Option 1	322,020	124,465	(197,555)
1002.8025	Balance of Plant (BOP)	Option 1	21,323	37,924	16,601
1002.8026	Safety	Option 1	458,506	152,758	(305,748)
1002.8027	Reference Plant Support	Option 1	256,244	134,197	(122,047)
1003.8031	Supervision / Admin	Option 1	4,178,071	5,538,007	1,359,936
1003.8032	Civil / Structural	Option 1	6,478,407	61,885,071	55,406,664
1003.8033	PUDC Procurement & Fabrication Support	Option 1	2,266,768	11,010,319	8,743,551
1003.8034	Electrical / I&C Site Construction Support	Option 1	13,887,592	55,419,699	41,532,107
1003.8035	Chemical-Construction Support	Option 1	7,706,043	26,282,420	18,576,377
1003.8036	Mechanical – Construction Support	Option 1	4,121,335	14,521,002	10,399,667
1003.8037	Plant Configuration Site Construction Support	Option 1	17,159,821	33,448,522	16,288,701
1003.8038	Engineering Mechanics - Site Construction Support	Option 1	2,689,234	22,219,149	19,529,915
1003.8042	Civil / Structural	Option 1	-	-	-
1004.8040	Responsible Engineer Process Unit Fabrication Support	Option 1	-	-	-
1004.8041	Supervision / Admin	Option 1	1,729,643	1,905,609	175,966
1004.8042	Civil / Structural	Option 1	1,876,517	1,474,971	(401,547)
1004.8043	PUDC Site Construction Support	Option 1	7,825,052	38,089,073	30,264,021
1004.8044	Electrical / I&C Procurement and Fabrication Support	Option 1	1,049,353	2,598,483	1,549,130
1004.8045	Software	Option 1	10,703,048	15,422,427	4,719,379
1004.8046	Chemical-Procurement/Fabrication Support	Option 1	6,300,379	22,677,366	16,376,987
1004.8047	Mechanical – Procurement/Fabrication Support	Option 1	989,173	1,624,043	634,870
1004.8048	Plant Configuration - Construction, Procurement & Fabrication Support	Option 1	5,320,984	5,747,615	426,631
1004.8049	Equipment Qualification	Option 1	4,830,151	9,815,262	4,985,111

CB&I AREVA MOX Services, LLC.
MFFF Project Cost by Management Area

Schedule 1.3

Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1005.8051	Supervision / Admin	Option 1	1,481,993	790,712	(691,281)
1005.8052	Mechanical – Startup & Operations Support	Option 1	5,301,191	489,505	(4,811,686)
1005.8053	Electrical / IC Startup and Operations Support	Option 1	7,232,791	3,112,993	(4,119,798)
1005.8054	Civil/ Structural Startup Support	Option 1	644,131	-	(644,131)
1005.8055	Engineering Mechanics Startup Support	Option 1	786,719	-	(786,719)
1005.8056	PUDC Startup Support	Option 1	6,351,227	19,280,579	12,929,352
1005.8057	Chemical/Mechanical Engineering Startup Support	Option 1	2,311,772	668,696	(1,643,076)
1005.8058	Software Modifications	Option 1	11,589,148	9,113	(11,580,035)
1005.8059	Plant Configuration	Option 1	4,033,678	-	(4,033,678)
1006.8001	Management / Admin ODC	Option 1	-	1,407,038	1,407,038
1006.8002	Project Controls OPC	Option 1	-	262,767	262,767
1006.8003	Engineering Assurance ODC	Option 1	-	446,932	446,932
1006.8005	Document Management	Option 1	-	169,402	169,402
1006.8006	Engineering Training	Option 1	-	131,226	131,226
1006.8011	Business Travel	Option 1	-	5,563	5,563
1006.8049	Engineering Mechanics	Option 1	-	925,155	925,155
1006.8052	Process Unit Responsible Engineer Startup Support	Option 1	-	3,949,689	3,949,689
1006.8053	Electrical / IC Startup Support	Option 1	-	3,540,890	3,540,890
1006.8054	Civil/ Structural Startup Support	Option 1	-	1,226,667	1,226,667
1006.8055	Engineering Mechanics Startup Support	Option 1	-	1,721,000	1,721,000
1006.8057	Chemical/ Mechanical Engineering Startup Support	Option 1	-	5,571,346	5,571,346
1006.8059	Plant Configuration	Option 1	-	1,136,403	1,136,403
1007.8071	Chemical Related Engineered Equipment	Option 1	-	-	-
1007.8072	Electrical Related Engineered Equipment	Option 1	-	-	-
1007.8073	Instrumentation & Control Related Engineered Equipment	Option 1	-	-	-
1007.8074	HVAC Related Engineered Equipment	Option 1	-	-	-
1007.8075	Miscellaneous Engineered Equipment	Option 1	-	-	-
Subtotal MA 10			\$ 179,644,130	\$ 462,555,733	\$ 282,911,603
1100.8101	Management / Administration	Option 1	\$ 1,553,652	\$ 2,438,108	\$ 884,456
1100.8102	NSA Project Controls	Option 1	1,106,575	1,586,135	479,560
1101.8111	Business Travel	Option 1	1,309,398	591,927	(717,471)
1101.8112	Temporary Assignments	Option 1	178,491	55,790	(122,701)
1101.8119	Other ODCs (Legal & S/C Costs)	Option 1	3,530,870	2,519,158	(1,011,712)
1102.8121	Defense of Licensing Basis	Option 1	7,263,816	11,460,643	4,196,827
1102.8122	Compliance Program	Option 1	3,871,881	2,967,711	(904,170)
1102.8123	Condition Reports Work Resolution	Option 1	-	205,042	205,042
1103.8132	Chemical Safety Support	Option 1	4,188,383	6,063,257	1,874,874

CB&I AREVA MOX Services, LLC.
MFFF Project Cost by Management Area

Schedule 1.3

Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1103.8133	Laboratory Support	Option 1	2,044,875	1,438,966	(605,909)
1104.8141	ES&H Program	Option 1	219,560	1,229,596	1,010,036
1104.8142	Radiological Protection	Option 1	13,298	5,869	(7,429)
1104.8143	Environmental Protection Program	Option 1	713,022	823,040	110,018
1104.8144	Industrial Safety Program	Option 1	380,343	638,299	257,956
1104.8145	Waste Management Program	Option 1	(50,533)	334,145	384,678
1104.8146	Fitness for Duty Program	Option 1	(216,463)	515,082	731,545
1104.8147	Emergency Response Program	Option 1	80,657	94,698	14,041
1104.8148	Employee Safety Incentive Program	Option 1	81,139	79,977	(1,162)
1104.8149	Construction - Safety Engineering Support	Option 1	233,618	459,000	225,382
1104.8151	Criticality Safety Procurement & Cons	Option 1	-	-	-
1105.8151	Criticality Safety Procurement & Const Support	Option 1	2,331,689	7,205,149	4,873,460
1105.8152	Criticality Safety Startup Support	Option 1	2,570,594	1,434,865	(1,135,729)
1105.8153	Criticality Safety Licensing Support	Option 1	2,971,399	2,046,062	(925,337)
1105.8154	Nuclear Radiation Protections	Option 1	3,145,818	5,028,696	1,882,878
1105.8155	Nuclear Radiation & Criticality Monitoring	Option 1	886,654	596,559	(290,095)
1105.8156	Emerg. Planning & Deactivation Design Spt.	Option 1	233,008	143,133	(89,875)
1106.8116	Integrated Safety Analysis	Option 1	-	-	-
1106.8161	Defense of the Safety Basis	Option 1	4,680,398	6,750,214	2,069,816
1106.8162	ISA Review of Design/Construction Modification	Option 1	2,793,633	2,831,117	37,484
1106.8164	Update the Safety Basis	Option 1	4,732,258	3,584,413	(1,147,845)
1106.8165	Support Update of the ISA Summary	Option 1	1,779,036	1,211,164	(567,872)
1109.8191	NRC Costs	Option 1	18,764,920	57,777,922	39,013,002
1109.8192	Physical Security Program	Option 1	79,356,300	15,133,967	(64,222,333)
1109.8193	Material Control & Accountability Program	Option 1	16,201,738	15,050,346	(1,151,392)
1109.8195	DOE/WSRC Costs	Option 1	-	-	-
1110.8101	Management / Administration	Option 1	-	226,869	226,869
1110.8102	Project Controls	Option 1	-	102,632	102,632
1112.8121	Defense of Licensing Basis	Option 1	-	1,524,420	1,524,420
1113.8132	Chemical Safety Support	Option 1	-	567,575	567,575
1115.8151	Criticality Safety Procurement & Const Support	Option 1	-	951,357	951,357
1115.8154	Nuclear Radiation Protections	Option 1	-	329,182	329,182
1116.8161	Defense of the Safety Basis	Option 1	-	493,859	493,859
Subtotal MA 11			\$ 166,950,027	\$ 156,495,942	\$ (10,454,084)
1500.8501	Management / Admin	Option 1	\$ 23,522,195	\$ 63,202,558	\$ 39,680,363
1500.8502	Project Controls	Option 1	10,943,800	32,745,008	21,801,208
1500.8503	Quality Assurance	Option 1	749,625	484,283	(265,342)

CB&I AREVA MOX Services, LLC.
MFFF Project Cost by Management Area

Schedule 1.3

Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1500.8504	ES&H	Option 1	2,719,758	694,576	(2,025,182)
1500.8506	Business	Option 1	1,451,888	4,061,850	2,609,963
1501.8511	Business Travel	Option 1	711,965	494,312	(217,653)
1501.8512	Temporary Assignments	Option 1	20,153	1,802,546	1,782,393
1501.8519	Project Controls	Option 1	-	-	-
1502.8521	Supervision / Admin	Option 1	-	-	-
1502.8522	Project Controls	Option 1	-	-	-
1502.8523	Quality Assurance	Option 1	-	-	-
1502.8524	ES&H	Option 1	-	-	-
1503.8531	Supervision / Admin	Option 1	-	-	-
1503.8532	Project Controls	Option 1	-	-	-
1503.8534	ES&H	Option 1	-	-	-
1504.8512	Temporary Assignments	Option 1	-	1,858	1,858
1504.8541	Supervision / Admin	Option 1	21,437,033	107,636,857	86,199,824
1504.8542	Work Control Group	Option 1	-	-	-
1505.8551	Supervision / Admin	Option 1	(41,922)	3,461,412	3,503,334
1505.8552	Project Controls	Option 1	-	-	-
1505.8554	ES&H	Option 1	-	-	-
Subtotal MA 15			\$ 61,514,495	\$ 214,585,261	\$ 153,070,766
1600.8601	Management / Admin	Option 1	\$ 2,710,032	\$ 9,826,376	\$ 7,116,344
1600.8602	Project Controls	Option 1	3,103,965	9,441,747	6,337,782
1600.8603	QA / QC	Option 1	100,762	88,152	(12,610)
1601.8611	Business Travel	Option 1	3,706,956	5,597,889	1,890,933
1602.8621	Supervision / Admin	Option 1	2,114,941	4,493,560	2,378,619
1603.8631	Supervision / Admin	Option 1	11,417,852	7,091,522	(4,326,329)
1603.8632	Job Living Expense	Option 1	-	418,575	418,575
1603.8641	Management / Admin	Option 1	(271,511)	-	271,511
1604.8641	Team Center Initiative	Option 1	271,511	315,244	43,733
1605.8645	CA - NRC/CGIE - PUDC Support	Option 1	-	5,663,563	5,663,563
1618.8748	PAD - Preplanning	Option 1	-	-	-
1618.8749	PAR - Preplanning	Option 1	-	-	-
1623.8785	Process Assembly Facilities	Option 1	28,909,318	33,434,879	4,525,561
Subtotal MA 16			\$ 52,063,827	\$ 76,371,508	\$ 24,307,681
1701.8701	KCB - Homogenization - Sampling	Option 1	\$ 1,934,236	\$ 6,458,691	\$ 4,524,455
1701.8702	KCC - PuO2 Decanning	Option 1	1,924,402	4,993,127	3,068,725
1701.8703	KDA - PUO2 Decanning	Option 1	3,627,549	19,430,268	15,802,719

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Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1701.8704	KDM - Pre-Polishing Milling	Option 1	9,462,891	32,784,460	23,321,569
1701.8705	KDR - Recanning	Option 1	1,901,161	218,211	(1,682,950)
1701.8706	KPA GB 4010	Option 1	1,004,520	2,531,529	1,527,009
1701.8751		Option 1	-	-	-
1701.8777	KPG - Sampling Automatic	Option 1	2,299,639	6,950,492	4,650,853
1701.8795	Long Lead Procurements	Option 1	(2,786,631)	-	2,786,631
1702.8707	KCB 5000 Manufacturing	Option 1	672,204	650,769	(21,435)
1702.8708		Option 1	-	-	-
1702.8709		Option 1	-	-	-
1702.8710		Option 1	-	-	-
1702.8711		Option 1	-	-	-
1702.8712	VDR - Filter Dismantling	Option 1	1,768,495	61,433	(1,707,062)
1702.8713	VDU - Maintenance & Mechanical Dismantling	Option 1	1,145,133	20,269	(1,124,864)
1702.8714		Option 1	-	-	-
1703.8715	DCM - PuO2 3013 Storage	Option 1	2,035,711	7,020,517	4,984,806
1703.8716	DCP - PuO2 Receiving	Option 1	6,463,066	6,290,272	(172,794)
1703.8717	KDA - PUO2 Decanning (EQ - 6000 Density Measurement)	Option 1	639,873	804,180	164,307
1703.8718		Option 1	-	-	-
1703.8719		Option 1	-	-	-
1704.8720	SDK - Rod Inspection and Sorting	Option 1	2,941,521	2,373,011	(568,510)
1704.8721	SEK - Helium Leak Test	Option 1	729,118	1,737,208	1,008,090
1705.8722	GMK - Rod Tray Loading	Option 1	982,195	1,162,390	180,195
1705.8723	SCE - Rod Scanning	Option 1	2,444,526	3,424,860	980,334
1705.8724	SMK - Rod Tray Handling	Option 1	2,112,509	2,488,168	375,659
1705.8725	STK - Rod Storage	Option 1	1,863,442	4,226,278	2,362,836
1705.8726	SXE - X Ray Inspection	Option 1	2,095,947	2,365,417	269,470
1705.8727	TAS - Assembly Handling and Storage	Option 1	1,113,247	9,358,223	8,244,976
1705.8728	TCK - Assembly Dry Cleaning	Option 1	362,720	745,981	383,261
1705.8729	TCL - Assembly Final Inspection	Option 1	2,008,889	1,275,021	(733,868)
1705.8730	TGJ - Reserve Pit	Option 1	2,010,346	358,421	(1,651,925)
1705.8731	TCP - Assembly Dismensional Inspection	Option 1	1,608,930	2,087,795	478,865
1705.8732	TGM - Assembly Mockup Loading	Option 1	3,651,566	2,896,012	(755,554)
1705.8733	TGV - Assembly Mounting	Option 1	1,300,960	817,271	(483,689)
1706.8734	PSE - Green Pellet Storage	Option 1	2,995,385	7,725,288	4,729,903
1706.8735	PSF - Sintering Pellet Storage	Option 1	3,059,559	7,545,089	4,485,530
1706.8736	PSI - Scrap Pellet Storage	Option 1	2,962,771	8,326,080	5,363,309
1706.8737	PSJ - Ground & Sorted Pellet Storage	Option 1	3,013,168	8,700,651	5,687,483
1707.8738	Lab Equip - LRD/LPG/LBT/LAC/KLN/KLL/KLK/KLH	Option 1	5,107,852	9,269,740	4,161,888

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1707.8739	Lab Equip - LME/LAU/FLT	Option 1	2,536,095	5,505,154	2,969,059
1707.8740	Lab Equip - LSR/LCP/KLJ	Option 1	6,615,656	10,858,433	4,242,777
1707.8741	Lab Equip - LPS/LET/LER/LDS/KLM/KLF/KLB/KLC/KLD	Option 1	6,827,803	13,008,455	6,180,652
1707.8742	Lab Equip - KLO/KLI/KLG/KLA/KLE	Option 1	7,139,421	10,325,401	3,185,980
1707.8743	Lab Equip - LSG/LLI	Option 1	419,067	641,331	222,264
1707.8744	Lab Equip - LFX	Option 1	1,409,182	2,368,710	959,528
1708.8745	DCE - PUO2 Buffer Storage	Option 1	2,172,985	11,862,545	9,689,560
1708.8746	GDE - Rod Decladding	Option 1	1,043,388	3,778,042	2,734,654
1708.8747	GME - Rod Cladding and Decontamination	Option 1	8,888,637	26,508,613	17,619,976
1708.8748	PAD - Preplanning	Option 1	594,028	2,114,547	1,520,519
1708.8749	PAR - Preplanning	Option 1	555,296	2,046,442	1,491,146
1708.8750	PML - Pellet Handling	Option 1	6,826,152	26,530,210	19,704,058
1708.8751	PQE - Quality Control & Manual Sorting	Option 1	3,300,657	7,432,755	4,132,098
1708.8752	PRE - Pellet Grinding	Option 1	2,839,088	7,040,991	4,201,903
1708.8753	PRF - Pellet Grinding	Option 1	2,839,088	6,926,812	4,087,724
1708.8754	PTE - Pellet Inspection & Sorting	Option 1	1,222,670	5,806,075	4,583,405
1708.8755	PTF - Pellet Inspection & Sorting	Option 1	1,216,910	5,693,786	4,476,876
1709.8756	DDP - UO2 Drum Emptying	Option 1	1,261,619	2,858,233	1,596,614
1709.8757	LCT - Test Line (part of laboratory)	Option 1	2,615,834	3,074,651	458,817
1709.8758	NBX - Primary Blend Ball Milling	Option 1	1,399,068	3,817,183	2,418,115
1709.8759	NBY - Scrap Ball Milling	Option 1	1,399,068	3,233,671	1,834,603
1709.8760	NCR - Scrap Processing	Option 1	5,294,395	9,035,233	3,740,838
1709.8761	NDD - PUO2 Can Receiving and Emptying	Option 1	1,578,425	3,803,765	2,225,340
1709.8762	NDP - Primary Dosing	Option 1	4,193,563	12,177,516	7,983,953
1709.8763	NDS - Final Dosing	Option 1	5,122,007	15,225,662	10,103,655
1709.8764	NTM - Jar Storage and Handling	Option 1	6,716,574	27,061,590	20,345,016
1709.8765	NXR - Powder Auxiliary	Option 1	2,022,419	6,940,680	4,918,261
1710.8766	NPG - Homogenization & Pelletizing	Option 1	3,917,028	14,407,626	10,490,598
1710.8767	NPH - Homogenization & Pelletizing	Option 1	3,862,290	13,959,131	10,096,841
1710.8768	NPI - Homogenization & Pelletizing	Option 1	3,873,576	2,312,137	(1,561,439)
1711.8769	KLA - Precipitation - Filtration - Oxidation	Option 1	2,345,151	8,520,845	6,175,694
1711.8770	KCB GB1000 - Homogenization - Sampling	Option 1	964,252	2,679,741	1,715,489
1711.8771	KDA - PUO2 Decanning	Option 1	404,974	998,491	593,517
1711.8772	KDB - Dissolution	Option 1	2,539,799	9,591,887	7,052,088
1711.8773	KDD - Dissolution of Chlorinated Feed	Option 1	4,764,685	20,578,565	15,813,880
1711.8774	KDM - Pre-Polishing Milling (GB6400/7400)	Option 1	786,781	1,380,592	593,811
1711.8775	KPA GB4000	Option 1	1,928,637	3,378,746	1,450,109
1711.8776	KPB GB1000	Option 1	681,155	1,777,821	1,096,666

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			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1711.8777	KPG - Sampling Automatic	Option 1	-	55,253	55,253
1711.8778	LLP - Pneumatic Transfer (33mm, PUO2 cans) Equipment	Option 1	2,315,566	6,852,035	4,536,469
1711.8779	LTP - Pneumatic Transfer (76mm, PUO2 cans) Equipment	Option 1	1,080,507	4,405,665	3,325,158
1711.8780	NTP - Pneumatic Transfer (133mm, PUO2 cans) Equipment	Option 1	1,947,379	6,673,608	4,726,229
1712.8781	NPP - Additives Preparation	Option 1	1,430,363	1,161,650	(268,713)
1712.8782	PFE/PFF - Sintering Furnace	Option 1	24,950,333	71,472,962	46,522,629
1712.8783	TXE - Assembly Packaging	Option 1	1,051,357	1,484,577	433,220
1712.8784	DRS - UO2 Receiving and Storage	Option 1	152,633	-	(152,633)
1712.8786	PFF - Sintering Furnace	Option 1	4	-	(4)
1713.8790	Process Unit Support	Option 1	2,519,533	6,239,241	3,719,708
1713.8791	Assembly Suspense Accounts	Option 1	-	-	-
1714.8708	KCD - Oxalic Mother Liquors Recovery Unit	Option 1	857,872	742,665	(115,207)
1714.8709	KPA (GB2000, 2010, 3000, 8000, 8510) Purification Cycle	Option 1	1,955,668	3,273,958	1,318,290
1714.8710	KPC - Nitric Acid Recovery Liquid Ring Pump GB	Option 1	915,063	769,481	(145,582)
1714.8711	KWD - Aqueous Waste Reception	Option 1	1,260,032	1,276,827	16,795
1714.8714	KPB (GB2000) Solvent Recovery Unit	Option 1	406,920	564,199	157,279
1715.8716	DCP - PuO2 Receiving	Option 1	-	157,000	157,000
1715.8718	VDQ Waste Storage	Option 1	3,069,408	639	(3,068,769)
1715.8719	VDT Waste Nuclear Count - Drum Hdling & NDA P	Option 1	889,899	4,468,007	3,578,108
1716.8791	Assembly BOAs Accounts	Option 1	10,629,229	50,274,011	39,644,782
1716.8795	Long Lead Procurements	Option 1	16,050,885	49,105,674	33,054,789
1716.8796	ATG Spares Procurements	Option 1	4,825,240	5,187,473	362,233
1717.8792	Self-Perform Suspense Accounts	Option 1	318,024	726,190	408,166
1717.8793	Design Modifications	Option 1	-	373,013	373,013
1717.8797	Unexpected Outsource Costs	Option 1	-	192,886	192,886
1717.8798	Duty and Shipping Costs	Option 1	-	2,461,227	2,461,227
1717.8799	REA Exposure	Option 1	-	-	-
1717.87MA	Maintenance Program, Layup/In-Storage	Option 1	-	340,078	340,078
1721.2101	Site Preparation	Option 1	29,136,316	29,492,485	356,169
1722.2201	Roads & Parking	Option 1	1,853,353	1,770,466	(82,887)
1722.2202	F" Road"	Option 1	5,529,770	3,767,924	(1,761,846)
1723.2301	Yard Structures	Option 1	2,222,753	3,861,339	1,638,586
1723.2501		Option 1	-	-	-
1724.2401	Underground Utilities	Option 1	10,809,194	21,315,647	10,506,454
1725.2501	Yard Fire Protection	Option 1	2,374,082	3,091,847	717,765
1726.2601	Chillers	Option 1	3,996,349	6,597,688	2,601,339
1727.2701	Site Security and Perimeter Intrusion Detection and Assessment Syste	Option 1	33,756,358	46,557,859	12,801,501
1728.2801	Yard Electrical & Lighting	Option 1	6,479,079	6,076,996	(402,083)

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			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1729.2901	Landscaping	Option 1	438,164	334,321	(103,843)
1731.3150	Administration Building	Option 1	8,158,478	11,047,671	2,889,193
1732.3250	Receiving Warehouse Building	Option 1	2,342,535	1,257,230	(1,085,305)
1732.3550	Standby Diesel Generator Building	Option 1	1	-	(1)
1733.3350	Secured Warehouse Building	Option 1	3,768,379	4,429,712	661,333
1734.3450	Tech Support & Access Control Building	Option 1	7,129,799	20,551,164	13,421,365
1735.3550	Standby Diesel Generator Building	Option 1	3,573,745	-	(3,573,745)
1735.3556	Standby Diesel Generator System/Equip.	Option 1	-	-	-
1736.3652	Civil / Structural / Architectural	Option 1	1,234,783	12,694,518	11,459,735
1736.3653	Mechanical / Piping	Option 1	1,519,602	5,681,459	4,161,857
1736.3654	Electrical	Option 1	2,419,944	12,245,457	9,825,513
1736.3655	I&C	Option 1	386,727	672,465	285,738
1736.3656	Emerg.Diesel Gen.System/Equipment	Option 1	7,797,805	10,668,334	2,870,529
1737.3751	MFFF Construction - Installation/Materials	Option 1	1,400,000	3,061,059	1,661,059
1737.3752	Civil / Structural / Architectural	Option 1	1,852,989	2,335,417	482,428
1737.3753	Mechanical / Piping	Option 1	7,584,611	2,577,658	(5,006,953)
1737.3754	Electrical	Option 1	3,535,409	916,676	(2,618,733)
1737.3755	I&C	Option 1	5,243,898	58,855	(5,185,043)
1737.3756	Reagent Systems Equipment / Piping	Option 1	824,061	9,741,737	8,917,676
1741.4100	Building Structure	Option 1	42,141,101	48,980,823	6,839,722
1741.4110	Architectural Features	Option 1	1,286,559	12,573,673	11,287,114
1741.4120	HVAC	Option 1	5,143,021	36,376,411	31,233,390
1741.4130	MOX Processing Area (BMP) – MOX Processing Area – Level 1 – Fire Pro	Option 1	5,210,678	12,698,949	7,488,272
1741.4140	Utility Equipment & Piping	Option 1	4,467,807	2,083,905	(2,383,902)
1741.4150	Process Piping	Option 1	14,137,249	17,941,478	3,804,229
1741.4170	Other Equipment	Option 1	7,913,483	7,094,780	(818,703)
1741.4180	Electrical	Option 1	12,710,594	47,210,472	34,499,878
1741.4190	Instrumentation	Option 1	13,114,418	2,734,549	(10,379,870)
1742.4200	Building Structure	Option 1	22,770,514	35,620,852	12,850,338
1742.4210	Architectural Features	Option 1	(191,335)	4,607,399	4,798,734
1742.4220	HVAC	Option 1	7,638,103	20,971,266	13,333,163
1742.4230	MOX Processing Area (BMP) – MOX Processing Area – Level 2 – Fire Pro	Option 1	6,021,572	14,596,534	8,574,962
1742.4240	Utility Equipment & Piping	Option 1	1,220,714	42,641	(1,178,073)
1742.4250	Process Piping	Option 1	7,971,156	11,361,603	3,390,447
1742.4270	Other Equipment	Option 1	2,454,660	2,570,349	115,689
1742.4280	Electrical	Option 1	14,912,858	29,359,393	14,446,535
1742.4290	Instrumentation	Option 1	7,707,535	1,728,847	(5,978,688)
1742.4600	Fuel Assembly / Rods	Option 1	(167)	-	167

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Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1743.4300	Building Structure	Option 1	-	28,748,394	28,748,394
1743.4310	Architectural Features	Option 1	215,717	5,178,527	4,962,810
1743.4320	HVAC	Option 1	15,793,051	36,243,152	20,450,100
1743.4330	MOX Processing Area (BMP) – MOX Processing Area – Level 3 – Fire Pro	Option 1	6,408,576	9,592,492	3,183,916
1743.4340	Utility Equipment & Piping	Option 1	1,757,160	104,868	(1,652,292)
1743.4350	Process Piping	Option 1	14,311,410	14,276,183	(35,227)
1743.4370	Other Equipment	Option 1	114,045	1,178,593	1,064,548
1743.4380	Electrical	Option 1	14,716,737	33,580,847	18,864,110
1743.4390	Instrumentation	Option 1	18,198,930	19,678,197	1,479,267
1744.4400	Building Structure	Option 1	837,780	12,198,268	11,360,488
1744.4410	Architectural Features	Option 1	79,148	-	(79,148)
1744.4420	HVAC	Option 1	353,456	2,882,398	2,528,942
1744.4430	MOX Processing Area (BMP) – MOX Processing Area – Level 4 – Fire Pr	Option 1	249,976	83,530	(166,446)
1744.4440	Utility Equipment & Piping	Option 1	581,867	610,698	28,831
1744.4480	Electrical	Option 1	78,559	946,936	868,377
1744.4490	Instrumentation	Option 1	(39,748)	52,684	92,432
1745.4500	MP Dismantling Units	Option 1	-	-	-
1745.4510	MP Receiving & Storage Units	Option 1	-	-	-
1745.4520	MP Ball Milling & Pneumatic Transfers	Option 1	-	-	-
1745.4530	MP Sintering Furnances	Option 1	1,133,724	-	(1,133,724)
1745.4540	MP Powder & Pellets	Option 1	-	-	-
1745.4550	MP Pellet Storage	Option 1	-	-	-
1745.4570	MP Rods & Assemblies	Option 1	-	-	-
1745.4580	MP Assembly Packaging Crane	Option 1	-	-	-
1745.4590	MP Laboratories	Option 1	-	-	-
1746.4600	Fuel Assembly / Rods	Option 1	4,898,683	4,513,528	(385,155)
1746.4610	Powder & Pellets	Option 1	18,241,062	13,852,934	(4,388,128)
1746.4620	Furnaces & Pellet Storage	Option 1	3,989,918	3,217,081	(772,837)
1746.4630	PuO2 Receiving, Storage & Decanning	Option 1	3,434,938	1,593,800	(1,841,138)
1746.4640	Labs & Testing	Option 1	36,210,885	35,673,183	(537,702)
1751.5100	Building Structure	Option 1	18,030,779	21,310,875	3,280,096
1751.5110	Architectural Features	Option 1	205,275	7,294,497	7,089,222
1751.5120	HVAC	Option 1	2,289,145	8,716,658	6,427,513
1751.5130	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 1 –	Option 1	1,247,530	1,801,582	554,052
1751.5140	Utility Equipment & Piping	Option 1	3,277,473	1,933,426	(1,344,046)
1751.5150	Process Piping & Equipment	Option 1	20,664,387	63,273,713	42,609,326
1751.5170	Other Equipment	Option 1	998,403	2,006,893	1,008,490
1751.5180	Electrical	Option 1	2,199,273	17,201,810	15,002,537

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1751.5190	Instrumentation	Option 1	2,886,311	776,284	(2,110,026)
1751.5250		Option 1	-	-	-
1751.5700		Option 1	-	-	-
1752.5200	Building Structure	Option 1	5,326,583	9,451,743	4,125,160
1752.5210	Architectural Features	Option 1	(11,660)	1,248,731	1,260,391
1752.5220	HVAC	Option 1	3,076,650	5,815,594	2,738,943
1752.5230	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 2 –	Option 1	772,172	1,481,053	708,881
1752.5240	Utility Equipment & Piping	Option 1	799,083	668,407	(130,676)
1752.5250	Process Piping & Equipment	Option 1	22,325,326	103,387,615	81,062,289
1752.5270	Other Equipment	Option 1	1,739,491	451,468	(1,288,023)
1752.5280	Electrical	Option 1	4,274,729	14,240,247	9,965,518
1752.5290	Instrumentation	Option 1	3,457,434	979,949	(2,477,485)
1753.5300	Building Structure	Option 1	7,043,044	18,004,541	10,961,497
1753.5310	Architectural Features	Option 1	(7,882)	1,752,632	1,760,514
1753.5320	HVAC	Option 1	2,842,768	5,006,959	2,164,191
1753.5330	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 3 –	Option 1	803,128	1,850,451	1,047,323
1753.5340	Utility Equipment & Piping	Option 1	570,699	240,601	(330,098)
1753.5350	Process Piping & Equipment	Option 1	12,311,041	15,128,246	2,817,205
1753.5370	Other Equipment	Option 1	6,140	723,933	723,793
1753.5380	Electrical	Option 1	8,088,441	16,393,472	8,305,031
1753.5390	Instrumentation	Option 1	4,125,471	1,390,017	(2,735,454)
1754.5400	Building Structure	Option 1	-	5,868,741	5,868,741
1754.5410	Architectural Features	Option 1	27,732	1,700,960	1,673,228
1754.5420	HVAC	Option 1	2,895,119	4,469,887	1,574,769
1754.5430	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 4 –	Option 1	987,070	2,143,927	1,156,857
1754.5440	Utility Equipment & Piping	Option 1	1,509,067	1,364,002	(145,065)
1754.5450	Process Piping & Equipment	Option 1	10,269,733	15,901,164	5,631,431
1754.5470	Other Equipment	Option 1	585,252	503,476	(81,776)
1754.5480	Electrical	Option 1	4,732,941	16,215,664	11,482,723
1754.5490	Instrumentation	Option 1	7,283,214	814,419	(6,468,795)
1754.5540	Utility Equipment & Piping	Option 1	2,231	-	(2,231)
1755.5500	Building Structure	Option 1	-	10,560,583	10,560,583
1755.5510	Architectural Features	Option 1	130,702	2,112,694	1,981,992
1755.5520	HVAC	Option 1	3,234,191	9,439,141	6,204,950
1755.5530	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 5 –	Option 1	1,653,686	1,390,009	(263,677)
1755.5540	Utility Equipment & Piping	Option 1	2,235,565	2,042,028	(193,537)
1755.5550	Process Piping & Equipment	Option 1	12,301,514	9,663,694	(2,637,820)
1755.5570	Other Equipment	Option 1	353,332	213,102	(140,230)

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Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1755.5580	Electrical	Option 1	3,703,393	13,361,396	9,658,003
1755.5590	Instrumentation	Option 1	13,320,716	15,438,044	2,117,327
1756.5600	Building Structure	Option 1	6,165,298	5,340,300	(824,998)
1756.5670	Other Equipment	Option 1	3,829,080	-	(3,829,080)
1756.5680	Electrical	Option 1	-	187,169	187,169
1756.5690	Instrumentation	Option 1	-	10,436	10,436
1757.5700	AP Chemical Units	Option 1	-	-	-
1757.5720	AP Mechanical Units	Option 1	-	-	-
1757.5730	PAF	Option 1	-	35,808	35,808
1758.5810	Mechanical Systems	Option 1	12,540,902	11,156,856	(1,384,046)
1758.5850	Chemical Systems	Option 1	2,438,555	7,082,040	4,643,485
1761.6100	Building Structure	Option 1	18,229,486	21,483,846	3,254,360
1761.6110	Architectural Features	Option 1	2,028,305	4,960,379	2,932,074
1761.6120	HVAC	Option 1	1,435,517	4,364,621	2,929,105
1761.6130	Shipping and Receiving Area (BSR) – Shipping and Receiving Area – Le	Option 1	1,605,863	1,443,333	(162,529)
1761.6140	Utility Equipment & Piping	Option 1	1,406,932	948,598	(458,335)
1761.6150	Process Piping	Option 1	330,741	1,199,682	868,941
1761.6170	Other Equipment	Option 1	258,851	358,450	99,599
1761.6180	Electrical	Option 1	9,717,335	9,076,335	(641,000)
1761.6190	Instrumentation	Option 1	468,092	1,093,509	625,417
1762.6200	Building Structure	Option 1	6,002,734	11,030,640	5,027,906
1762.6210	Architectural Features	Option 1	35,534	808,993	773,459
1762.6220	HVAC	Option 1	2,833,861	7,875,915	5,042,054
1762.6230	Shipping and Receiving Area (BSR) – Shipping and Receiving Area – Le	Option 1	1,254,324	1,448,395	194,071
1762.6240	Utility Equipment & Piping	Option 1	107,201	20,100	(87,101)
1762.6250	Process Piping	Option 1	186,238	311,367	125,129
1762.6270	Other Equipment	Option 1	-	34,875	34,875
1762.6280	Electrical	Option 1	2,433,971	5,336,801	2,902,830
1762.6290	Instrumentation	Option 1	120,382	334,483	214,102
1763.6300	Building Structure	Option 1	-	5,600,636	5,600,636
1763.6310	Architectural Features	Option 1	477,402	1,669,516	1,192,114
1763.6320	HVAC	Option 1	2,563,310	7,568,000	5,004,690
1763.6330	Shipping and Receiving Area (BSR) – Shipping and Receiving Area – Le	Option 1	1,755,869	1,659,212	(96,657)
1763.6340	Utility Equipment & Piping	Option 1	146,215	58,334	(87,881)
1763.6350	Process Piping	Option 1	45,070	863,815	818,745
1763.6370	Other Equipment	Option 1	7,331	105,520	98,189
1763.6380	Electrical	Option 1	1,079,778	8,730,876	7,651,098
1763.6390	Instrumentation	Option 1	1,591,341	1,779,241	187,901

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Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1764.6400	Building Structure	Option 1	-	3,072,441	3,072,441
1764.6470	Other Equipment	Option 1	6,602	-	(6,602)
1764.6480	Electrical	Option 1	-	186,341	186,341
1764.6490	Instrumentation	Option 1	-	10,457	10,457
1771.7100	Building Structure	Option 1	7,436,315	8,425,791	989,476
1771.7110	Architectural Features	Option 1	7,146,295	1,420,056	(5,726,239)
1771.7120	HVAC	Option 1	927,006	4,359,752	3,432,746
1771.7130	Fire Protection	Option 1	2,988	-	(2,988)
1771.7140	Utility Equipment & Piping	Option 1	8,055	35,057	27,002
1771.7170	Other Equipment	Option 1	328	-	(328)
1771.7180	Electrical	Option 1	3,131,063	1,682,127	(1,448,936)
1771.7190	Instrumentation	Option 1	231,865	86,625	(145,240)
1772.7200	Building Structure	Option 1	25,824,745	39,222,116	13,397,371
1772.7210	Architectural Features	Option 1	1,068,385	31,026,898	29,958,513
1772.7270	Other Equipment	Option 1	274,440	113,238	(161,202)
1772.7280	Electrical	Option 1	1,039,438	1,091,331	51,893
1774.7401	Subcontractor Project Management/Project Controls	Option 1	6,598,306	72,846,805	66,248,499
1774.7402	Subcontractor Project Administration/Accounting	Option 1	-	-	-
1774.7403	Subcontractor Quality Assurance / Quality Control	Option 1	-	-	-
1774.7404	Subcontractor Environmental, Safety and Health	Option 1	-	3	3
1774.7405	Subcontractor Home Office Support	Option 1	-	-	-
1774.7406	Subcontractor Mobilization	Option 1	437,300	859,829	422,528
1774.7407	Subcontractor Demobilization	Option 1	26,800	580,131	553,331
1774.7408	Dewatering, Erosion and Sedimentation Control	Option 1	176,470	176,470	(0)
1774.7409	Equipment Rental (Including Vehicles)	Option 1	2,356,013	20,944,738	18,588,725
1774.7410	Miscellaneous Procured Services	Option 1	225,600	1,447,138	1,221,538
1774.7411	Consumables and Expendable Materials	Option 1	775,267	4,263,877	3,488,610
1774.7412	Performance Bond	Option 1	871,448	1,107,034	235,586
1774.7413	Tools	Option 1	196,633	387,367	190,734
1774.7414	Craft Distributable and Indirect Costs	Option 1	3,766,887	14,124,171	10,357,284
1774.7415	Concrete Batch Plant	Option 1	3,778,207	3,778,185	(22)
1774.7416	Independent Test Lab	Option 1	1,018,992	1,887,424	868,432
1774.7417	NDE Testing	Option 1	874,858	904,226	29,368
1774.7418	Craft Support for MFFF Construction	Option 1	1,445,077	23,870,675	22,425,598
1774.7419	Construction Distributables - Misc	Option 1	8,997,911	44,517,380	35,519,469
1774.7420	Bulk Cable for MFFF Construction	Option 1	10,123,467	36,510,224	26,386,757
1774.7421	Electrical Connectors for MFFF Construction	Option 1	-	-	-
1774.7422	Electric Glove Box Penetrations for MFFF Construction	Option 1	-	-	-

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Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1774.7424	Distributables - Bulk Commodity - HVAC	Option 1	16,844,578	17,545,355	700,777
1774.7427	Rebar MFFF Construction	Option 1	-	59,420	59,420
1774.7428	Civil/Structural Material	Option 1	12,784,971	44,341,502	31,556,531
1774.7429	Distributables - Bulk Commodity - Stainless Steel Ball Valves	Option 1	17,659,657	17,088,381	(571,276)
1774.7430	Distributable - Bulk Commodity Account - Chillers	Option 1	2,428,798	2,321,091	(107,707)
1774.7431	Bulk Commodity - Fans	Option 1	-	-	-
1774.7432	Electrical Material and Other Miscellaneous Labor Acct	Option 1	15,115,366	81,807,066	66,691,700
1774.7433	Instrumentation & Controls Material	Option 1	97,473,686	73,807,772	(23,665,914)
1774.7434	Chemical Equipment	Option 1	-	9,905,742	9,905,742
1774.7435	Distributables - HVAC Equipment	Option 1	7,046,692	92,131,147	85,084,455
1774.7436	Suspense Account - Process Equipment	Option 1	-	36,697	36,697
1774.7438	Mechanical Equipment	Option 1	54,802,155	143,942,463	89,140,308
1774.7439	Consumable & Expendable Materials Specific to CP-27 – BAP Chemical P	Option 1	1,584,469	37,778,832	36,194,363
1774.7440	Support Building for the Fabrication of Supports on Site Specific to	Option 1	-	39,366,963	39,366,963
1774.7441	BRP Distributables	Option 1	-	481,143	481,143
1774.7442	Craft Labor for Non-Discipline Specific Scope	Option 1	-	7,070,939	7,070,939
1774.7445	Craft Orientation & Training	Option 1	-	3,113,237	3,113,237
1774.7446	MOX Construction Back Charges	Option 1	-	-	-
1774.7453	Craft Orientation & Training	Option 1	-	125,868	125,868
1774.7454	Bulk Procurement - Material	Option 1	-	253,976	253,976
1774.7455	Distributable - Subcontract	Option 1	-	750,385	750,385
1775.7501	Batch Plant Capital Cost	Option 1	-	-	-
1775.7502	Batch Plant Operations	Option 1	-	0	0
1775.7503	Batch Plant Concrete Materials	Option 1	-	(0)	(0)
Subtotal MA 17			\$ 1,328,934,157	\$ 2,902,768,004	\$ 1,573,833,847
1802.8820	Supplies & Services	Option 1	\$ 354,576	\$ 2,167,694	\$ 1,813,118
1802.8821	Office Equipment, Furniture Leases & Purchases	Option 1	2,924,041	4,278,754	1,354,713
1803.8830	Temporary Site Features & Services	Option 1	128,086	518,980	390,894
1803.8832	Buildings Shops / Trailers	Option 1	15,839,261	22,521,397	6,682,136
1803.8833	Utilities & Services	Option 1	14,684,284	45,585,905	30,901,621
1803.8850	Misc Field Construction Supplies	Option 1	-	-	-
1804.8840	Equipment	Option 1	12,689,446	43,706,780	31,017,334
1804.8842	Construction Materials Management	Option 1	209,481	5,794,327	5,584,846
1804.8843	Tools	Option 1	223,651	754,407	530,756
1804.8850	Temporary Site Features & Services	Option 1	-	-	-
1805.8850	Miscellaneous Field Supplies & Services	Option 1	17,474,277	72,941,704	55,467,427
1805.8851	Foreign National Escorts	Option 1	3,240,702	-	(3,240,702)

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Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
Subtotal MA 18			\$ 67,767,805	\$ 198,269,948	\$ 130,502,143
1901.6017	Human Performance Improvement Program	Option 1	\$ -	\$ 162,906	\$ 162,906
1901.6018	QA/QC - JLE/LTTA	Option 1	-	-	-
1901.6020	QA Program Management & Administration	Option 1	3,211,818	12,989,851	9,778,033
1901.6021	Quality Engineering	Option 1	4,758,444	24,010,181	19,251,737
1901.6022	Audit & Surveillance	Option 1	1,318,214	13,036,397	11,718,183
1901.6023	Quality Control Projects	Option 1	4,652,064	78,946,499	74,294,435
1901.6024	QA & QC Assembly GS	Option 1	1,716,727	4,392,446	2,675,719
1901.6025	MOX Potential Back Charges	Option 1	-	399	399
1901.6026	QA/QC Subcontractors	Option 1	300,000	256,791	(43,209)
1901.6027	Testing & Inspection QA/QC	Option 1	3,776,738	22,121,449	18,344,711
1901.6028	Commercial Grade Dedication	Option 1	-	54,273	54,273
1901.6029	Regulatory Compliance	Option 1	720,511	5,147,845	4,427,334
1901.9003	Quality Engineering	Option 1	1,353,049	-	(1,353,049)
1901.9503	Quality Engineering	Option 1	-	-	-
1902.6017	Human Performance Improvement Program	Option 1	-	10,204	10,204
1902.6020	QA Program Management & Administration	Option 1	-	1,809,790	1,809,790
1902.6021	Quality Engineering	Option 1	-	1,277,372	1,277,372
1902.6022	Audit & Surveillance	Option 1	-	1,270,862	1,270,862
1902.6023	Quality Control Projects	Option 1	-	2,036,800	2,036,800
1902.6026	QA/QC Subcontractors	Option 1	-	22,215	22,215
1902.6027	Testing & Inspection QA/QC	Option 1	-	349,467	349,467
1902.6029	Regulatory Compliance	Option 1	-	983,821	983,821
1902.9503	Quality Engineering	Option 1	1,215,489	-	(1,215,489)
Subtotal MA 19			\$ 23,023,054	\$ 168,879,568	\$ 145,856,514
2000.9001	Management / Administration	Option 1	\$ 11,099,584	\$ 12,719,516	\$ 1,619,932
2000.9002	Project Controls	Option 1	2,776,133	1,844,714	(931,419)
2000.9003	Quality Assurance	Option 1	-	-	-
2000.9004	Environment, Safety & Health	Option 1	-	-	-
2001.9011	Business Travel	Option 1	2,753,497	1,049,346	(1,704,151)
2001.9012	Temporary Assignments	Option 1	2,111,832	71,116	(2,040,716)
2001.9014	Test Equipment & Consumables	Option 1	14,911,902	3,837,602	(11,074,300)
2001.9017	Spare Parts	Option 1	3,961,181	385,458	(3,575,723)
2002.9021	Generic Test Documents	Option 1	1,853,126	1,643,871	(209,255)
2002.9022	Validation Plans	Option 1	8,423,068	1,059,587	(7,363,481)
2002.9023	General Test Programs	Option 1	1,764,832	2,380,380	615,548

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Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
2002.9024	Technical Support	Option 1	3,217,683	2,628,695	(588,988)
2002.9026	Cold Startup Training	Option 1	2,567,004	1,366,887	(1,200,117)
2002.9527	Generic Test Documents	Option 1	-	-	-
2003.9011	Generic Test Documents	Option 1	-	-	-
2003.9031	In-Advance Tests in U.S.	Option 1	8,731,119	8,577,404	(153,715)
2003.9032	In-Advance Tests in Europe	Option 1	3,929,344	2,238,999	(1,690,345)
2004.9041	Aqueous Polishing	Option 1	26,892,156	17,121,299	(9,770,858)
2004.9042	MOX Process	Option 1	23,517,959	21,675,945	(1,842,014)
2004.9043	Balance of Plant	Option 1	19,879,489	15,238,873	(4,640,616)
2004.9044	Reaction to General Incident (RGI)	Option 1	3,827,814	2,529,087	(1,298,727)
2004.9047	Turnover & Logistics	Option 1	13,498,496	2,852,716	(10,645,780)
2004.9048	Laboratory - IPT	Option 1	-	8,094,707	8,094,707
2004.9049	Process Control - IPT	Option 1	-	7,939,498	7,939,498
2005.9051	SU In-Advance Tests Rework and Modifications in US	Option 1	-	176,629	176,629
2006.9060	Maintenance Program, Layup/In-Storage	Option 1	-	4,473,849	4,473,849
2007.9071	MOX IPT Rework	Option 1	-	34,495,693	34,495,693
2010.9101	Management / Administration - IPT	Option 1	-	31,409,273	31,409,273
2010.9102	Project Controls - IPT	Option 1	-	4,389,193	4,389,193
2010.9103	Program Support for Start-up	Option 1	-	3,425,955	3,425,955
2011.9111	Business Travel - IPT	Option 1	-	310,955	310,955
2011.9112	Generic Test Documents	Option 1	-	-	-
2011.9114	Test Equipment & Consumables - IPT	Option 1	-	11,050,555	11,050,555
2011.9117	Spare Parts - IPT	Option 1	-	3,630,728	3,630,728
2012.9124	Technical Support - IPT	Option 1	-	2,299,157	2,299,157
2012.9126	Cold Startup Training - IPT	Option 1	-	6,130,662	6,130,662
Subtotal MA 20			\$ 155,716,219	\$ 217,048,349	\$ 61,332,130
2100.9501	Management / Administration	Option 1	\$ 22,539,333	\$ 22,482,010	\$ (57,323)
2100.9502	Project Controls	Option 1	3,957,266	4,341,736	384,470
2100.9503	Quality Assurance	Option 1	-	-	-
2100.9504	Environment, Safety & Health	Option 1	-	-	-
2100.9506	PS&A	Option 1	(0)	-	0
2101.9511	Business Travel	Option 1	2,134,842	2,028,587	(106,255)
2101.9512	Temporary Assignments	Option 1	3,183,717	6,462,252	3,278,535
2101.9515	Consumables	Option 1	-	2,438,200	2,438,200
2101.9518	Software	Option 1	4,114,132	3,954,314	(159,818)
2102.9522	Training at Richland	Option 1	2,863,086	1,182,981	(1,680,105)
2102.9523	Training at LaHague	Option 1	48,189,683	3,675,088	(44,514,595)

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Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
2102.9524	Training at Melox	Option 1	64,791,905	5,648,433	(59,143,472)
2102.9525	Other Training	Option 1	66,704,236	85,723	(66,618,513)
2102.9526	Operations Activities	Option 1	(1,222,760)	157,198	1,379,958
2102.9527	Operations Process Simulator	Option 1	8,646,253	1,584,317	(7,061,936)
2102.9528	Reference Plant Training Direct Costs	Option 1	(8,646,253)	108,059,327	116,705,580
2103.9531	Organizational Documents	Option 1	1,141,455	4,215,983	3,074,528
2103.9532	Laboratory Procedures	Option 1	4,252,295	2,677,948	(1,574,347)
2103.9533	Maintenance Procedures	Option 1	4,612,425	4,593,634	(18,791)
2103.9534	Operating Procedures	Option 1	10,763,793	8,148,158	(2,615,635)
2103.9535	Hot Startup Planning	Option 1	373,242	1,121,733	748,491
2103.9536	Turnover to Operations	Option 1	454,344	-	(454,344)
2103.9537	Support to Other groups	Option 1	920,976	7,136,528	6,215,552
2104.9541	Early Option 2 Proposal Development (Labor)	Option 1	-	672,700	672,700
2105.9550	Aqueous Polishing Activities	Option 1	259,640	3,216,088	2,956,448
2105.9551	Powder Pellet Activities	Option 1	173,085	6,619,357	6,446,272
2105.9552	Rod Bundle Activities	Option 1	129,730	2,473,008	2,343,278
2105.9553	Balance of Plant Activities	Option 1	167,995	6,595,420	6,427,425
2105.9554	Laboratory Activities	Option 1	-	14,901,345	14,901,345
2105.9555	Maintenance Activities	Option 1	320,048	31,130,877	30,810,829
2105.9556	Logistics / Warehousing	Option 1	-	2,675,586	2,675,586
2105.9557	System Engineering Activities	Option 1	172,262	12,540,813	12,368,551
Subtotal MA 21			\$ 240,996,730	\$ 270,819,345	\$ 29,822,615
2201.8138	Relocation	Option 1	\$ -	\$ 20,912	\$ 20,912
2201.8139	Field Office Supplies	Option 1	-	-	-
2201.8141	ES&H Program	Option 1	1,473,688	8,149,431	6,675,743
2201.8143	Environmental Protection Program	Option 1	1,134,848	5,433,744	4,298,896
2201.8144	Industrial Safety Program	Option 1	1,022,974	930,909	(92,065)
2201.8145	Waste Management Program	Option 1	932,607	3,318,918	2,386,311
2201.8146	Fitness for Duty Program	Option 1	1,795,043	1,379,366	(415,677)
2201.8147	Emergency Preparedness Program	Option 1	243,004	1,640,343	1,397,339
2201.8148	Employee Safety Incentive Program	Option 1	519,249	1,053,890	534,641
2201.8149	ES & H Safety Engineer	Option 1	1,783,459	11,290,726	9,507,267
2201.8150	Field Office Supplies	Option 1	-	5,499	5,499
2201.8820	Field Office Supplies	Option 1	171,293	90,217	(81,076)
2201.9004	Field Office Supplies	Option 1	-	-	-
2201.9504	Field Office Supplies	Option 1	-	-	-
2201.9506	Field Office Supplies	Option 1	-	-	-

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Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
2202.8139	Field Office Supplies	Option 1	135,535	-	(135,535)
2202.8141	ES&H Program	Option 1	-	1,232,710	1,232,710
2202.8143	Environmental Protection Program	Option 1	-	949,660	949,660
2202.8145	Waste Management Program	Option 1	-	693,898	693,898
2202.8147	Emergency Response Program	Option 1	-	599,081	599,081
2202.8148	Employee Safety Incentive Program	Option 1	-	177,741	177,741
2202.8149	ES & H Safety Engineer	Option 1	-	2,101,834	2,101,834
2202.9004	Field Office Supplies	Option 1	2,434,223	-	(2,434,223)
2202.9504	Radiological Protection Early Start Up	Option 1	15,267,591	15,591,116	323,525
2202.9506	Field Office Supplies	Option 1	481,757	-	(481,757)
Subtotal MA 22			\$ 27,395,271	\$ 54,659,996	\$ 27,264,725
9008.0901	DOE Annual Costs for the SRS M&O Support to MOX fo all Infrastructur	Option 1	\$ 28,449,268	\$ 65,437,317	\$ 36,988,049
9009.0901	DOE/WSRC Support	Option 1	(0)	-	0
9009.0902	DOE Annual Costs for the SRS M&O Support to MOX for Infrastructure S	Option 1	97,675,478	56,179,840	(41,495,638)
9009.0903	DOE Tech Spt. (Non-MOX Services Cost)	Option 1	138,317,424	115,587,284	(22,730,140)
Subtotal MA 90			\$ 264,442,170	\$ 237,204,441	\$ (27,237,729)
Total Option 1			\$ 2,778,822,480	\$ 5,563,751,381	\$ 2,784,928,901
0110.5101	NRC Costs - MFFF	Base	\$ 12,492,680	\$ 12,646,529	\$ 153,849
0110.5301	Environmental Report	Base	1,808,835	1,822,489	13,655
0110.5302	Electrolyzer Testing	Base	268,674	268,684	10
0110.5303	ORNL Gallium Testing	Base	100,000	100,000	-
0110.5304	ORNL Criticality Review	Base	150,000	150,000	-
0110.5305	Clemson University Research	Base	1,300,232	1,421,977	121,745
0110.5306	Development & Test Programs	Base	2,061,991	2,111,621	49,630
0110.5307	Site Develop./Infrast. Improvement OPC Work	Base	496,072	496,340	268
0110.5308	SCE Scanner Testing	Base	506,071	511,780	5,709
0110.5401	MFFF Operations Planning	Base	3,546	(84,994)	(88,540)
0110.5402	Safety & Systems Integration	Base	213,271	210,415	(2,856)
0110.5411	Licensing	Base	5,058,850	5,107,144	48,293
0110.5421	Engineering Support to Licensing - PDG	Base	88,152	98,149	9,996
0110.5422	Engineering Support to Licensing - FDG	Base	103,586	121,379	17,793
0110.5423	Engine+B1001ering Support to Licensing - C/S	Base	112,400	116,292	3,892
0110.5424	Eng. Support to Lic. - Mech.Prog.	Base	193,906	283,621	89,716
0110.5425	Eng. Support to Lic.- Elect/ I&C/S&S/MC&A	Base	25,950	25,078	(872)
0110.5427	Engr Support to Lic - Nuclear Safety	Base	4,805,180	4,823,621	18,440

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			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
0110.5428	MFFF Environmental / Permitting	Base	324,405	320,086	(4,319)
0110.5431	Facility Security Vulnerability Assessment	Base	181,482	181,482	-
0110.5432	Facility Licensing Plans	Base	2,301,401	2,305,639	4,238
0110.5450	Miscellaneous Studies	Base	808,170	970,612	162,443
0110.5451	Coord. & Oversight of CETL Research Projects	Base	210,465	285,972	75,507
0110.5452	CAB Change Phase II Scoping & Devel	Base	178,090	180,858	2,768
0110.5453	Monitoring & Inspection Impacts Study	Base	30,700	30,935	235
0110.5454	CAB Phase II	Base	3,950	3,875	(75)
0110.5455	Maximize the use of MFFF Study	Base	-	104,822	104,822
0110.5499	Control Area Boundary Change Scoping	Base	732,197	731,640	(557)
0110.5601	DNFSB	Base	-	60	60
0111.1101	General	Base	5,026,335	4,800,117	(226,218)
0111.1102	Mobilization, De-Mob, & Close-out	Base	888,051	899,521	11,470
0111.1103	Management	Base	5,971,015	5,945,756	(25,259)
0111.1104	Administrative	Base	2,660,030	2,667,640	7,610
0111.1105	Support Services	Base	5,357,579	5,107,135	(250,444)
0111.1106	Miscellaneous	Base	756,216	737,690	(18,527)
0111.1107	General Expenses	Base	14,729,895	14,553,159	(176,736)
0111.1108	Procedure Development	Base	29	29	-
0112.8301	MDG Base Contract (Pre FY 2003)	Base	4,741,885	5,049,539	307,654
0113.1301	General	Base	16,203,184	16,151,645	(51,539)
0113.1302	Receiving	Base	812,940	814,098	1,158
0113.1303	Powder	Base	2,908,689	2,927,651	18,962
0113.1304	Pellets	Base	2,065,684	2,066,298	614
0113.1305	Cladding	Base	1,414,974	1,415,796	822
0113.1306	Assembling	Base	968,526	967,433	(1,093)
0113.1307	Laboratory	Base	557,218	557,757	538
0113.1308	Samples Pneumatic Transfer	Base	191,095	191,097	3
0113.1309	Waste Management	Base	436,191	436,733	541
0113.1310	Material Control & Accountability	Base	325,233	325,534	301
0113.1311	Process Control	Base	422,428	422,672	244
0113.1312	Integrated Safety Analysis	Base	5,059,365	5,080,631	21,266
0113.1313	Facility Input	Base	819,271	819,425	153
0113.1399	PDG MOX Process Unplanned Work	Base	386,378	363,641	(22,736)
0114.1401	General	Base	4,992,486	4,943,475	(49,011)
0114.1402	Dissolution	Base	4,389,754	4,396,665	6,910
0114.1403	Purification	Base	3,985,738	3,989,262	3,524
0114.1404	Conversion	Base	1,661,571	1,662,388	817

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0114.1405	Facility Input	Base	3,071,732	3,073,636	1,904
0114.1406	Safety	Base	7,625,187	7,785,239	160,052
0115.1501	General	Base	13,537,594	13,628,548	90,954
0115.1502	Buildings, Structures & Yard	Base	37,545,386	37,399,208	(146,178)
0115.1503	Deliverables	Base	20,290	20,283	(7)
0115.1504	Mechanical Programs	Base	31,095,227	67,260,261	36,165,035
0115.1505	Electrical Programs	Base	780,168	917,015	136,846
0115.1506	Nuclear Safety Programs	Base	14,145,270	14,413,675	268,405
0115.1507	Mechanical Systems & Components	Base	27,601,213	28,782,999	1,181,786
0115.1508	Electrical Systems & Components	Base	33,524,806	40,963,289	7,438,483
0115.1509	Nuclear Safety Systems & Components	Base	2,715,956	2,710,756	(5,200)
0115.1510	Process Mechanical	Base	15,042,764	15,181,618	138,854
0115.1511	Mechanical Gloveboxes	Base	5,819,916	5,593,595	(226,321)
0115.1512	Site Development / Infrastructure Improvement	Base	2,101,908	1,966,135	(135,773)
0115.1513	Plant Design System	Base	37,535,687	52,553,299	15,017,613
0115.8154	Nuclear Radiation Protections	Base	-	-	-
0116.1601	DNFSB & Commonality Questions & Issues	Base	0	535	535
0116.8401	SDG Base Contract Pre-FY 2003	Base	2,516,494	2,463,869	(52,625)
0117.1701	Licensing	Base	14,857,708	14,916,060	58,352
0117.1702	Environmental Report	Base	6,678	6,128	(550)
0117.1703	Environment	Base	453,526	457,912	4,386
0117.1704	Safety & Health	Base	698,078	713,480	15,402
0117.1705	Emergency Planning	Base	152,275	149,349	(2,927)
0117.1706	ISA Support (Contractor's ODCs)	Base	19,944,162	19,852,077	(92,085)
0117.1707	Technology Assessment (TA) Support	Base	1,502,765	1,571,146	68,380
0117.1710	UCNI Training	Base	92,890	93,039	148
0118.1801	Office rent, suppl/serv, equi.& furnit L&P	Base	2,997,271	2,994,997	(2,274)
0118.1802	Furniture	Base	2,378,914	2,378,913	(1)
0118.1803	Cabling & Telephone	Base	94,023	94,023	(0)
0118.1804	Upfit	Base	387,935	387,936	1
0118.1805	Relocation Services	Base	10,495	10,495	-
0118.1806	Remote Location Office Space	Base	412,913	415,133	2,220
0119.1901	Computer Equipment & Software L&P	Base	5,643,574	5,719,902	76,329
0119.1902	Software	Base	1,136,702	1,136,702	0
0119.1903	Service Contracts	Base	283,607	283,607	0
0119.1904	Initial Setup	Base	12,910	13,101	191
0120.8110	Project Management Pre-Construction Planning	Base	4,945,005	4,974,617	29,611
0120.8120	Project Controls Pre-Construction	Base	2,498,517	2,525,925	27,408

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0120.8130	Project QA Pre-Construction	Base	-	-	-
0120.8140	Project ES&H Pre-Construction	Base	765,345	758,325	(7,020)
0120.8160	Project Services & Admin Pre-Construction	Base	62,741	64,361	1,620
0120.8170	Procure./Subcontract Admin Pre-Construction	Base	270,533	284,712	14,179
0120.8200	PreOpt1BConstrPrjTitleIII EngineeringMgmt-LL EnginProcurement	Base	3,175	3,153	(22)
0120.8210	Engineering Civil / Structural Pre-Construction	Base	179,711	177,361	(2,349)
0120.8220	Engineering Mechanical Pre-Construction	Base	53,541	39,784	(13,757)
0120.8230	Engineering Electrical / I&C Pre-Construction	Base	61,123	60,918	(204)
0121.1654	MFFF Operations Planning	Base	11,426,550	10,880,272	(546,278)
0122.1611	PuO2 Polishing Planning	Base	670,387	159,814	(510,573)
0122.1612	DUO2 Supply Planning	Base	513,193	488,321	(24,872)
0123.1420	Up Front Design	Base	-	2,823,111	2,823,111
0124.1415	DMO - Preserve The Option	Base	-	3,134,723	3,134,723
Subtotal MA 01			\$ 429,487,860	\$ 494,922,248	\$ 65,434,387
0661.6101	Project Office Operations	Base	\$ 6,289,830	\$ 6,418,213	\$ 128,382
0661.6102	Personnel Relocations	Base	35,173	57,213	22,040
0661.6103	Project Support Services	Base	-	97	97
0661.6105	Mixed Oxide (MOX) Proj. Ext. Communications	Base	446,447	440,973	(5,474)
0661.6106	IT Labor	Base	3,770,735	3,753,790	(16,945)
0661.6110	Independent Review Team (IRT) Review - NA54	Base	1,475,958	1,486,360	10,402
0661.6150	Relocations	Base	3,055,742	3,056,897	1,155
0662.6201	Project Controls & Integration	Base	14,059,560	14,129,225	69,665
0662.6202	Risk Management	Base	939,493	923,190	(16,303)
0663.6301	QA Program Management & Administration	Base	604,125	597,540	(6,585)
0663.6302	Quality Engineering	Base	1,209,198	1,224,692	15,494
0663.6303	Quality Verification	Base	1,294,876	1,286,519	(8,358)
0664.6401	ES&H Integration	Base	1,345,129	1,340,978	(4,151)
0664.6402	Regulatory Affairs Management & Admin.	Base	452,998	431,238	(21,760)
0664.6403	Safety and Health	Base	75	75	-
0664.6404	Incident Investigation / Corrective Action Program	Base	-	(53)	(53)
0665.6501	Trade-off Studies	Base	1,291	2,286	995
0665.6502	Plutonium (Pu) Disposition Study	Base	-	457	457
0665.6505	NA	Base	-	-	-
0666.6600	Project Services & Administration	Base	1,670	1,670	-
0666.6601	Contracts	Base	18,707,760	19,104,032	396,272
0666.6602	Administration	Base	2,923,771	2,607,252	(316,520)
0666.6603	Electronic Doc / Records Management	Base	1,788,884	1,809,605	20,721

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			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
0666.6604	Training & Internal Communication	Base	332,019	362,896	30,877
0666.6605	Project Accounting / Finance	Base	2,928,733	2,912,125	(16,608)
0666.6606	Bank Analysis Fees	Base	3,097	16,703	13,606
0666.6608	Procurement	Base	3,014,377	3,027,990	13,614
0666.6609	Asset Management	Base	294,085	287,005	(7,080)
0667.6701	Licensing	Base	4,830	4,830	-
0668.6801	Charlotte Office Space	Base	52,913	52,238	(675)
0668.6802	Furniture	Base	33,304	33,304	0
0668.6803	Cabling & Telephone	Base	0	(17,325)	(17,325)
0668.6804	UpFit	Base	1,966	3,962	1,996
0668.6805	Relocation Services	Base	1,917	2,456	540
0668.6806	Remote Location Office Space	Base	46,201	46,201	(0)
0668.6810	Office Rent, Supplies, & Services	Base	5,792,974	5,833,773	40,799
0668.6811	Office Equipment & Furniture Lease & Purchase	Base	2,600,476	2,607,350	6,873
0668.6812	Computer Equipment and Software Leases & Purchases	Base	8,071,682	8,043,555	(28,127)
0668.8810	Offsite Office Rent, Supplies & Services	Base	3,293,692	3,331,590	37,897
0668.8811	Offsite Off.Equip.& Furnit. L. & P., and Workspace Upfit	Base	326,998	328,503	1,504
0668.8812	Offsite Computer Equip.& Software L.& P.	Base	728,823	749,822	20,999
0669.6901	Computer Hardware	Base	74,662	74,923	262
0669.6902	Computer Software	Base	21,584	21,717	133
0669.6903	Computer Services Contracts	Base	17,602	18,228	627
0669.6904	Initial Setup	Base	930	(9,464)	(10,394)
0670.8299	Process Unit Assembly Planning	Base	2,246,073	2,234,104	(11,969)
Subtotal MA 06			\$ 88,291,653	\$ 88,638,735	\$ 347,082
1204.8240	PEG BOA's, Sole Source & Adv.Procure. Items	Base	\$ 7,621,259	\$ 7,094,929	\$ (526,330)
1204.8241	PEG Management	Base	8,348,983	8,089,063	(259,920)
1204.8242	PEG Training & Technical Support	Base	4,480,527	4,473,163	(7,364)
1204.8243	PEG Build to Print Manuf./Install. Required	Base	413,137	420,711	7,574
1204.8244	PEG AP/MP Laboratory Design/Build	Base	1,521,991	2,151,804	629,813
1204.8245	PEG Documents External Review Support	Base	395,037	411,870	16,833
1204.8246	Process Support AP/MP Lab Design/Build	Base	1,652,363	1,534,414	(117,949)
1204.8247	PreOpt1ACnstPrjctProcUnitPEGVendorDesign	Base	21,166,096	36,139,755	14,973,659
1204.8248	PreOpt1BProcUnitsPEG Design/Bld UnitSpecs	Base	7,837,333	10,069,627	2,232,294
1204.8249	PreOpt1ACnstPrjct Proc Units PEG ODCs	Base	1,098,216	1,431,198	332,982
1204.8293	Mech/Struct Procurements Engineering	Base	(21,951)	-	21,951
1205.8250	US Regulations/ Process Requirements	Base	4,675,608	5,078,781	403,173
1205.8251	PreOpt1BConstPrjProc-USRG/PRG Req Mgmt	Base	1,654,432	1,726,646	72,214

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1205.8252	US Regulations Personnel	Base	1,956,373	1,943,952	(12,421)
1205.8253	Process Requirements Personnel	Base	4,240,835	4,723,359	482,524
1205.8254	Pre-Option 1A Construction Project Process-General Support	Base	1,556,585	1,631,079	74,493
1205.8255	PreOpt1AConstPrjProc-USRG/PRG Admin Spt	Base	213	254	41
1205.8256	Facility Design Group Support to PEG	Base	434,416	582,035	147,619
1205.8257	Systems Engineering Group Support to I55EG	Base	247,426	251,565	4,140
1205.8259	PreOpt1AConstPrjProc-USRG/PRG - ODCs	Base	963,061	1,037,150	74,089
1209.8290	Pre-Option 1B MDG, SDG & PEG Management	Base	4,856,102	4,788,660	(67,442)
1209.8291	DCS Equipment Group Management - ODCs	Base	552,106	552,464	358
1211.8131	Project QA - Option 1	Base	682,418	666,916	(15,501)
1211.8171	PreOp1BCnstPrjMgmtPurchs Procurement - Mgt & Admin	Base	1,729,620	1,817,722	88,102
1212.8292	Commercial Grade Dedication (CGD)	Base	1,354,743	12,377,050	11,022,307
1212.8293	Chemical/Mechanical Subcontract Technical Representatives (STRs) and	Base	4,180,687	17,173,735	12,993,048
1212.8294	Electrical/I&C Procurements Engineering	Base	4,309,747	9,268,521	4,958,774
1212.8295	PEG Support of Others (Facility Eq)	Base	15,049	463	(14,586)
1212.8296	PassPort Implementation & Support Engineering	Base	2,612,921	2,291,097	(321,824)
1212.8297	PEG - Vendor Support Activities for Self Procurements	Base	345,639	13,490	(332,149)
1212.8298	PEG Management & Administration (Facility Eq)	Base	1,421,186	1,271,685	(149,501)
1213.8292	PEG Technical Support & Training (Facility Eq)	Base	-	591,906	591,906
Subtotal MA 12			\$ 92,302,157	\$ 139,605,065	\$ 47,302,909
1301.8302	DCS Integrated Mgt	Base	\$ 5,815,155	\$ 6,536,527	\$ 721,373
1301.8303	MDG Support Services	Base	2,268,635	2,554,857	286,222
1301.8304	MDG Travel & Relocation - DCS	Base	3,186,264	2,923,393	(262,872)
1301.8305	Production Centers Mgt	Base	1,839,335	1,834,853	(4,482)
1301.8306	MDG Travel & Relocation Production Centers	Base	1,554,772	1,574,026	19,254
1301.8307	MDG ODCs Production Centers	Base	3,245,262	2,907,943	(337,318)
1301.8308	MDG Procurement Engineering Support	Base	836,816	806,667	(30,149)
1301.8390	Design Offices Mgt	Base	12,182,827	13,209,064	1,026,237
1301.8391	Production Internal Support	Base	9,622,880	11,044,415	1,421,535
1302.8302	GDE - Rod Decladding	Base	-	-	-
1302.8309	Technical Management	Base	14,129,663	14,604,868	475,205
1302.8310	Technical Requirement Representatives	Base	3,732,781	3,394,330	(338,451)
1302.8391	GDE - Rod Decladding	Base	-	-	-
1302.8392	Follow-up	Base	9,395,507	11,387,710	1,992,202
1302.839A	TSR Support from PDG	Base	669,122	495,197	(173,925)
1302.839B	LLP/LTP/NTP Detailed Piping Design	Base	-	188,202	188,202
1303.8312	NDD - PuO2 Can Receiving & Emptying	Base	887,937	1,180,158	292,221

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1303.8313	NDP - Primary Dosing	Base	2,623,186	3,075,251	452,065
1303.8314	NDS - Final Dosing	Base	2,845,323	3,093,351	248,028
1303.8319	NTM - Jar Storage & Handling	Base	3,351,931	4,266,963	915,032
1303.8320	NXR - Powder Auxiliary	Base	1,458,995	2,032,952	573,957
1304.8311	DCE - PuO2 Buffer Storage	Base	743,598	1,181,879	438,281
1304.8312	NDD Conformance	Base	47,851	132,157	84,306
1304.8313	NDP Conformance	Base	1,199	18,959	17,760
1304.8314	NDS Conformance	Base	70,585	120,759	50,174
1304.8319	NTM Conformance	Base	14,997	68,967	53,970
1304.831A	VDR Design	Base	340,737	393,445	52,708
1304.831B	VDU Design	Base	190,740	174,431	(16,309)
1304.831C	DCM Design	Base	851,334	582,630	(268,704)
1304.831G	GMK Design	Base	250,649	235,016	(15,633)
1304.831H	SCE Design	Base	566,643	708,694	142,051
1304.831J	SMK Design	Base	543,419	641,167	97,748
1304.831L	SXE Design	Base	528,315	403,954	(124,361)
1304.831M	TAS Design	Base	609,723	675,546	65,823
1304.831N	TCL/TCK/TGJ Design	Base	727,871	644,809	(83,062)
1304.831P	TCP Design	Base	336,594	371,805	35,211
1304.831Q	TGM Design	Base	956,945	1,274,482	317,537
1304.831R	TGV Design	Base	-	-	-
1304.831Y	LFY Design	Base	225,927	277,136	51,209
1304.8320	NXR Conformance	Base	-	2,071	2,071
1304.8321	NCR - Scrap Processing	Base	3,343,517	4,035,217	691,700
1304.8324	PRE / PRF - Grinding	Base	1,907,562	2,303,385	395,823
1304.8325	PTE/PTF — Pellet Inspect & Sorting	Base	326,626	396,055	69,429
1304.8326	PQE — Quality Control & Manual Sorting	Base	-	444,859	444,859
1304.8327	PAD - Pellet Repackaging	Base	250,030	277,167	27,137
1304.8328	PAR - Scrap Box Loading	Base	371,422	478,804	107,382
1304.8329	PSE - Green Pellet Storage	Base	466,501	629,885	163,383
1304.832A	KCB Design	Base	229,253	160,747	(68,506)
1304.832G	KDA Design	Base	343,594	330,971	(12,623)
1304.8330	PSF - Sintered Pellet Storage	Base	578,166	717,822	139,656
1304.8331	PSI - Scrape Pellet Storage	Base	921,984	1,146,863	224,879
1304.8332	PSJ - Ground & Sorted Pellet Storage	Base	712,294	985,943	273,648
1304.8333	PML - Pellet Handling	Base	3,694,380	4,201,902	507,522
1304.8336	GDE - Rod Decladding	Base	546,308	932,184	385,876
1304.8338	SEK Helium Leak Test	Base	323,770	220,636	(103,134)

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1304.8344	LCT - Test Line	Base	553,058	951,193	398,135
1304.8345	VDR - Filter Dismantling	Base	-	12	12
1304.8346	DDP - UO2 Drum Emptying	Base	407,403	537,418	130,015
1304.8348	KDM Conformance	Base	88,262	477,130	388,868
1304.8363	KDA - Decanning (B)	Base	1,813,719	3,415,974	1,602,255
1304.8365	KPG Sampling, Automatic Conformance	Base	196,230	668,054	471,824
1304.8370	KPA 4010 Purification Cycle Conformance	Base	50,402	233,571	183,169
1304.8375	KDM - Milling (AFS) - PuO2 Can Handling	Base	482,144	529,834	47,690
1304.8376	KDM 2000 - Prepolishing Milling Conformance	Base	210,469	647,479	437,010
1304.8377	KDM 2200 Pre-Polishing Milling	Base	569,061	707,373	138,312
1304.8378	KDR 1/2/3/4 ADO Conform	Base	210,259	594	(209,665)
1304.8379	KDR - Recanning Unit	Base	600,185	210,863	(389,322)
1304.8397	Struct. LLE - Aiken	Base	352,677	305,686	(46,991)
1305.8315	LLP Pneumatic Transfer (33 mm)	Base	1,397,356	1,807,734	410,378
1305.8316	LLP Pneumatic Transfer (76 mm)	Base	738,814	986,221	247,407
1305.8318	NTP Pneumatic Transfer (133 mm)	Base	785,457	1,085,049	299,592
1305.8325	PTE/PTF - Pellet Inspect & Sorting	Base	1,667,730	1,593,203	(74,527)
1305.8326	PQE - QC & Manual Sorting	Base	1,437,808	1,186,020	(251,789)
1305.8361	KCB - PuO2 Homogenization & Sampling	Base	1,464,913	1,876,771	411,858
1305.8362	KCC - Canning	Base	1,579,664	1,841,250	261,586
1305.8365	KPG - Liquid Sampling (W1)	Base	938,353	900,405	(37,948)
1305.8366	KDB/KPF Electrolyzers (W9)	Base	1,233,421	1,365,619	132,198
1305.8367	KCA - Oxalic Precip Metering Wheels	Base	687,971	821,657	133,686
1305.8368	KDA - Dosing Hoppers (W6)	Base	1,841,117	2,271,901	430,784
1305.8369	KPA/KPB - Settler Mixers (W7)	Base	852,049	911,336	59,287
1305.8370	KPA 4010 Purification Cycle	Base	394,454	377,100	(17,354)
1305.8371	KCA - Oxalic Precip Oxid Precip & Filter	Base	552,846	718,321	165,475
1305.8372	KCA - Oxalic Precip Oxid Calcin Furn.	Base	823,556	906,346	82,790
1305.8373	KCB - PuO2 Tumbler Mixer	Base	543,854	532,877	(10,976)
1305.8374	KDD - Declorination / Dissolution	Base	2,545,246	3,076,733	531,487
1305.8376	KDM - Milling (AFS)	Base	1,994,225	1,955,112	(39,113)
1305.8378	KDR - Recanning Unit	Base	1,587,663	1,711,309	123,646
1305.8380	KPB 1000 Solvent Recovery	Base	687,875	779,190	91,315
1305.8381	KDM-Pre-Polishing MillingUnits6000-7400 Dsgn	Base	1,156,174	1,119,284	(36,889)
1305.8399	Dosing Hopper - Structural Qualification	Base	55,200	48,456	(6,744)
1306.8322	NPE/NPF - Homogenization & Pelletizing	Base	1,439,711	1,439,629	(82)
1306.8323	PFE/PFF - Sintering Furnace	Base	8	8	0
1306.8334	GME - Rod Cladding & Decontamination	Base	5,886,780	6,773,734	886,955

CB&I AREVA MOX Services, LLC.
MFFF Project Cost by Management Area

Schedule 1.3

Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1306.8339	SDK - Rod Inspection & Sorting	Base	1,120,227	1,341,572	221,346
1306.8347	NBX/NBY - Ball Mining	Base	2,287,881	2,641,655	353,774
1306.8348	KDM - Milling	Base	901,055	937,277	36,222
1306.8349	NPG/H/I-Homogenization & Pelletizing Design	Base	4,875,339	5,925,669	1,050,330
1306.8398	Struct. LLE - Bagnol	Base	586,697	957,492	370,795
1307.831A	VDR	Base	(99,558)	314,988	414,546
1307.831B	VDU	Base	(51,218)	203,988	255,206
1307.831C	DCM	Base	188,956	186,681	(2,275)
1307.831D	DCP	Base	-	-	-
1307.831E	VDQ	Base	-	-	-
1307.831F	VDT	Base	-	-	-
1307.831G	GMK	Base	26,858	152,250	125,392
1307.831H	SCE	Base	370,314	-	(370,314)
1307.831J	SMK	Base	401,273	188,086	(213,187)
1307.831K	STK	Base	349,931	166,743	(183,188)
1307.831L	SXE	Base	98,936	-	(98,936)
1307.831M	TAS	Base	414	-	(414)
1307.831N	TCL/TCK/TGJ	Base	572,675	-	(572,675)
1307.831P	TCP	Base	7,405	249,043	241,638
1307.831Q	TGM	Base	83,776	26,121	(57,655)
1307.831R	TGV	Base	25,009	-	(25,009)
1307.831S	Grp 5.1	Base	-	-	-
1307.831T	Grp 5.2	Base	-	-	-
1307.831U	Grp 5.3	Base	-	-	-
1307.831X	Grp 5.6	Base	-	-	-
1307.831Y	Grp 5.8 / LFX	Base	(100,098)	-	100,098
1307.832A	KCB	Base	(37,503)	-	37,503
1307.832B	KCD	Base	-	-	-
1307.832C	KPA	Base	-	-	-
1307.832D	KPB	Base	-	-	-
1307.832E	KPC	Base	-	-	-
1307.832F	KWD	Base	-	-	-
1307.832G	KDA	Base	(186,468)	-	186,468
1308.832A	KCB	Base	-	-	-
1308.832B	KCD	Base	-	-	-
1308.832C	KPA	Base	-	-	-
1308.832D	KPB	Base	-	-	-
1308.832E	KPC	Base	-	-	-

CB&I AREVA MOX Services, LLC.
MFFF Project Cost by Management Area

Schedule 1.3

Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1308.832F	KWD	Base	-	-	-
1308.832G	KDA	Base	-	-	-
1308.832H	Grp 5.4	Base	-	-	-
1308.832J	Grp 5.5	Base	-	-	-
1309.839C	DCP Design	Base	1,233,174	1,509,027	275,853
1309.839D	SXE DCR 10-0422	Base	41,004	175,664	134,660
1309.83KU	K Unit Pumps and Valves Design	Base	3,001,805	2,048,230	(953,575)
1310.83JL	JLE and LTТА VAR	Base	-	501,479	501,479
1310.83LB	Lab Unit Glovebox Design	Base	6,838,818	4,692,873	(2,145,945)
1310.83LE	Laboratory Responsible Engineers and STRs	Base	713,444	1,893,632	1,180,188
1310.83TS	Task Support Requests	Base	1,720,793	606,129	(1,114,664)
1311.83MF	Multi Fuel Design - DCRs	Base	-	1,091,946	1,091,946
Subtotal MA 13			\$ 163,465,978	\$ 182,862,060	\$ 19,396,082
1400.8401	SDG Base Contract Pre-FY 2003	Base	\$ -	\$ -	\$ -
1401.8402	Management	Base	10,336,701	15,178,727	4,842,026
1401.8403	Support Services	Base	10,828,126	16,693,729	5,865,603
1401.8404	SDG Travel & Relocation DCS	Base	2,797,063	3,595,869	798,807
1401.8405	Facility Space, Utilities Supplies & Services	Base	584,903	585,591	687
1401.8418	Design Reviews	Base	554,699	421,952	(132,747)
1401.8419	PLC & Supervisor for Fire Safety	Base	-	-	-
1402.8406	Platform Hardware & Maintenance	Base	5,668,945	4,064,808	(1,604,137)
1402.8407	Platform Hardware & Maintenance - Aiken	Base	2,974,087	9,885,980	6,911,893
1402.8408	SDG Procurement Engineering Support	Base	2,643,073	2,118,987	(524,085)
1402.8410	Standards	Base	5,551,916	6,652,081	1,100,165
1402.8411	Networks	Base	565,490	846,427	280,936
1402.8413	Laboratory Information Management System (LIMS)	Base	1,086,571	2,159,452	1,072,881
1402.8414	Process PCs	Base	3,867,684	2,715,494	(1,152,189)
1402.8417	RESERVED	Base	-	-	-
1402.8477	PLC & Supervisor for Unit KWG	Base	2,632	-	(2,632)
1402.8490	Simulation & Testing	Base	2,350,845	3,516,527	1,165,682
1402.8497	CGD Embedded Software Evaluation Support	Base	-	-	-
1403.8412	Manufacturing Management Information System (MMIS)	Base	8,166,997	11,834,983	3,667,987
1404.8420	PLC's General	Base	6,273,187	9,163,751	2,890,565
1404.8421	PLC & Supervisor for Unit DRS/DDP	Base	265,395	317,978	52,583
1404.8422	PLC & Supervisor for Unit DCP/DCM	Base	285,618	465,729	180,111
1404.8423	PLC & Supervisor for Unit DCE/NTP	Base	359,379	542,483	183,104
1404.8424	PLC & Supervisor for Unit NDD	Base	438,978	786,601	347,623

CB&I AREVA MOX Services, LLC.
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Schedule 1.3

Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1404.8425	PLC & Supervisor for Unit NDP	Base	682,677	1,075,897	393,220
1404.8426	PLC & Supervisor for Unit NBX/NBY	Base	498,276	711,638	213,362
1404.8427	PLC & Supervisor for Unit NDS	Base	669,188	1,036,479	367,291
1404.8428	PLC & Supervisor for Unit NXR	Base	539,770	785,887	246,117
1404.8429	PLC & Supervisor for Unit NCR	Base	468,698	803,389	334,691
1404.8430	PLC & Supervisor for Unit NTM	Base	802,903	1,069,351	266,448
1404.8431	PLC & Supervisor for Unit NPE/NPF	Base	1,006,420	1,530,655	524,235
1404.8432	PLC & Supervisor for Unit LTP	Base	314,862	457,658	142,795
1404.8433	PLC & Supervisor for Unit PFE/PFF	Base	917,858	1,351,119	433,261
1404.8434	PLC & Supervisor for Unit PRE/PRF	Base	685,882	863,994	178,112
1404.8435	PLC & Supervisor for Unit PTE/PTF	Base	572,730	976,017	403,287
1404.8436	PLC & Supervisor for Unit PQE	Base	498,246	690,866	192,620
1404.8437	PLC & Supervisor for Unit PAD	Base	345,162	717,963	372,801
1404.8438	PLC & Supervisor for Unit PAR	Base	268,538	358,147	89,609
1404.8439	PLC & Supervisor for Unit PSE	Base	313,991	509,018	195,027
1404.8440	PLC & Supervisor for Unit PSF	Base	291,444	445,990	154,546
1404.8441	PLC & Supervisor for Unit PSI	Base	520,594	699,084	178,490
1404.8442	PLC & Supervisor for Unit PSJ	Base	294,578	346,367	51,789
1404.8443	PLC & Supervisor for Unit GME/GMF	Base	1,036,693	2,391,966	1,355,273
1404.8444	PLC & Supervisor for Unit GMK	Base	330,859	429,250	98,391
1404.8445	PLC & Supervisor for Unit GDE	Base	252,310	382,174	129,864
1404.8446	PLC & Supervisor for Unit SXE	Base	301,398	312,383	10,985
1404.8447	PLC & Supervisor for Unit SEK	Base	213,769	501,346	287,577
1404.8448	PLC & Supervisor for Unit SDK	Base	480,030	854,364	374,334
1404.8449	PLC & Supervisor for Unit SCE	Base	280,661	389,985	109,324
1404.8450	PLC & Supervisor for Unit SMK/STK	Base	264,614	444,178	179,564
1404.8451	PLC & Supervisor for Unit TGM	Base	329,704	511,706	182,002
1404.8452	PLC & Supervisor for Unit TGV	Base	365,675	76,311	(289,365)
1404.8453	PLC & Supervisor for Unit TAS	Base	323,296	589,992	266,696
1404.8454	PLC & Supervisor for Unit TCK	Base	232,217	216,548	(15,669)
1404.8455	PLC & Supervisor for Unit TCP	Base	293,119	454,702	161,583
1404.8456	PLC & Supervisor for Unit TCL/TGJ	Base	260,094	307,091	46,997
1404.8457	PLC & Supervisor for Unit TXE	Base	-	-	-
1404.8458	PLC & Supervisor for Unit LCT	Base	233,520	95,641	(137,879)
1404.8459	PLC & Supervisor for Unit VDQ	Base	289,040	-	(289,040)
1404.8460	PLC & Supervisor for Unit VDT	Base	272,705	383,623	110,918
1404.8461	PLC & Supervisor for Unit VDR/VDU	Base	307,916	29,649	(278,267)
1404.8485	PLC & Supervisor for Fire Safety	Base	112,727	42,505	(70,222)

CB&I AREVA MOX Services, LLC.
MFFF Project Cost by Management Area

Schedule 1.3

Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1404.8486	PLC & Supervisor for LGF	Base	248,541	305,291	56,750
1404.8487	M&I - PRE/PRF	Base	22,704	-	(22,704)
1405.8462	PLC & Supervisor for Unit KDD	Base	618,915	863,150	244,235
1405.8463	PLC & Supervisor for Unit KDA	Base	1,227,686	1,813,250	585,564
1405.8464	PLC & Supervisor for Unit KDB	Base	362,161	455,895	93,734
1405.8466	PLC & Supervisor for Unit KPA	Base	802,321	926,538	124,217
1405.8467	PLC & Supervisor for Unit KPB	Base	294,556	317,577	23,021
1405.8468	PLC & Supervisor for Unit KPC	Base	450,704	391,037	(59,667)
1405.8469	PLC for Unit LFX	Base	145,197	45,858	(99,339)
1405.8470	PLC & Supervisor for Unit KPG	Base	459,965	650,175	190,210
1405.8471	PLC & Supervisor for Unit LLP	Base	361,211	703,119	341,908
1405.8472	PLC & Supervisor for Unit KCA	Base	369,527	481,004	111,477
1405.8473	PLC & Supervisor for Unit KCB	Base	463,461	714,164	250,703
1405.8474	PLC & Supervisor for Unit KCC	Base	440,253	545,313	105,060
1405.8475	PLC & Supervisor for Unit KCD	Base	374,760	395,510	20,750
1405.8476	PLC & Supervisor for Unit KWD	Base	308,186	336,167	27,981
1405.8477	PLC & Supervisor for Unit KWG	Base	360,871	373,415	12,545
1405.8478	PLC & Supervisor for Unit KDM	Base	976,950	2,322,500	1,345,550
1405.8480	PLC & Sup. for Unit KUA/KUB/KUD/KUG/KUH	Base	922,792	567,817	(354,975)
1405.8481	PLC & Supervisor for Ventilation	Base	1,624,291	1,090,387	(533,904)
1405.8482	PLC & Supervisor for Electrical Distribution	Base	734,153	513,569	(220,584)
1405.8483	PLC & Supervisor for Fluids	Base	1,145,980	656,234	(489,746)
1405.8484	PLC & Supervisor for Unit KDR	Base	401,926	53,068	(348,858)
1405.8486	PLC & Supervisor for LGF	Base	-	-	-
1405.8490	Simulation & Testing	Base	-	-	-
1405.8494	Independent Software Verification & Validation	Base	-	-	-
1405.8496	SPLC Procurement Contract Oversight	Base	1,015,728	12,237,107	11,221,379
1405.8497	CGD Embedded Software Evaluation Support	Base	-	662,001	662,001
1406.8419	Software Analysis & Translation	Base	2,911,338	2,911,871	533
1407.8409	PLC & Supervisor for Fire Safety	Base	-	-	-
Subtotal MA 14			\$ 98,518,631	\$ 144,722,097	\$ 46,203,466
Base Subtotal			\$ 872,066,279	\$ 1,050,750,205	\$ 178,683,926
MFFF Project Total			\$ 3,650,888,759	\$ 6,614,501,585	\$ 2,963,612,827

Sources:

[A] May 2007 PRISM Data adjusted for budget transfers between July 2007 and September 2012

CB&I AREVA MOX Services, LLC.
MFFF Project Cost by Management Area

Schedule 1.3

Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
[B] 2012 contract proposal value as stated in December 2012 PRISM data and adjusted for 2012 Rebaseline Addendums					
[C] Calculated					

CB&I AREVA MOX Services, LLC.
MFFF Project Cost Growth by Cost Account and Claim Category

Schedule 1.31

Cost Account	Cost Account Description	Contract	Claim Category	[A] [B] [C] = B - A		
				2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1003.8033	PUDC Procurement & Fabrication Support	Option 1	Process Units	\$ 2,266,768	\$ 11,010,319	\$ 8,743,551
1004.8043	PUDC Site Construction Support	Option 1	Process Units	7,825,052	38,089,073	30,264,021
1004.8045	Software	Option 1	Process Units	10,703,048	15,422,427	4,719,379
1005.8056	PUDC Startup Support	Option 1	Process Units	6,351,227	19,280,579	12,929,352
1600.8601	Management / Admin	Option 1	Process Units	2,710,032	9,826,376	7,116,344
1600.8602	Project Controls	Option 1	Process Units	3,103,965	9,441,747	6,337,782
1600.8603	QA / QC	Option 1	Process Units	100,762	88,152	(12,610)
1601.8611	Business Travel	Option 1	Process Units	3,706,956	5,597,889	1,890,933
1602.8621	Supervision / Admin	Option 1	Process Units	2,114,941	4,493,560	2,378,619
1603.8631	Supervision / Admin	Option 1	Process Units	11,417,852	7,091,522	(4,326,329)
1603.8632	Job Living Expense	Option 1	Process Units	-	418,575	418,575
1603.8641	Management / Admin	Option 1	Process Units	(271,511)	-	271,511
1604.8641	Team Center Initiative	Option 1	Process Units	271,511	315,244	43,733
1605.8645	CA - NRC/CGIE - PUDC Support	Option 1	Process Units	-	5,663,563	5,663,563
1618.8748	PAD - Preplanning	Option 1	Process Units	-	-	-
1618.8749	PAR - Preplanning	Option 1	Process Units	-	-	-
1623.8785	Process Assembly Facilities	Option 1	Process Units	28,909,318	33,434,879	4,525,561
1701.8701	KCB - Homogenization - Sampling	Option 1	Process Units	1,934,236	6,458,691	4,524,455
1701.8702	KCC - PuO2 Decanning	Option 1	Process Units	1,924,402	4,993,127	3,068,725
1701.8703	KDA - PUO2 Decanning	Option 1	Process Units	3,627,549	19,430,268	15,802,719
1701.8704	KDM - Pre-Polishing Milling	Option 1	Process Units	9,462,891	32,784,460	23,321,569
1701.8705	KDR - Recanning	Option 1	Process Units	1,901,161	218,211	(1,682,950)
1701.8706	KPA GB 4010	Option 1	Process Units	1,004,520	2,531,529	1,527,009
1701.8751		Option 1	Process Units	-	-	-
1701.8777	KPG - Sampling Automatic	Option 1	Process Units	2,299,639	6,950,492	4,650,853
1701.8795	Long Lead Procurements	Option 1	Process Units	(2,786,631)	-	2,786,631
1702.8707	KCB 5000 Manufacturing	Option 1	Process Units	672,204	650,769	(21,435)
1702.8708		Option 1	Process Units	-	-	-
1702.8709		Option 1	Process Units	-	-	-
1702.8710		Option 1	Process Units	-	-	-
1702.8711		Option 1	Process Units	-	-	-
1702.8712	VDR - Filter Dismantling	Option 1	Process Units	1,768,495	61,433	(1,707,062)
1702.8713	VDU - Maintenance & Mechanical Dismantling	Option 1	Process Units	1,145,133	20,269	(1,124,864)
1702.8714		Option 1	Process Units	-	-	-
1703.8715	DCM - PuO2 3013 Storage	Option 1	Process Units	2,035,711	7,020,517	4,984,806
1703.8716	DCP - PuO2 Receiving	Option 1	Process Units	6,463,066	6,290,272	(172,794)
1703.8717	KDA - PUO2 Decanning (EQ - 6000 Density Measurement)	Option 1	Process Units	639,873	804,180	164,307
1703.8718		Option 1	Process Units	-	-	-
1703.8719		Option 1	Process Units	-	-	-
1704.8720	SDK - Rod Inspection and Sorting	Option 1	Process Units	2,941,521	2,373,011	(568,510)
1704.8721	SEK - Helium Leak Test	Option 1	Process Units	729,118	1,737,208	1,008,090
1705.8722	GMK - Rod Tray Loading	Option 1	Process Units	982,195	1,162,390	180,195
1705.8723	SCE - Rod Scanning	Option 1	Process Units	2,444,526	3,424,860	980,334
1705.8724	SMK - Rod Tray Handling	Option 1	Process Units	2,112,509	2,488,168	375,659
1705.8725	STK - Rod Storage	Option 1	Process Units	1,863,442	4,226,278	2,362,836
1705.8726	SXE - X Ray Inspection	Option 1	Process Units	2,095,947	2,365,417	269,470
1705.8727	TAS - Assembly Handling and Storage	Option 1	Process Units	1,113,247	9,358,223	8,244,976

CB&I AREVA MOX Services, LLC.
MFFF Project Cost Growth by Cost Account and Claim Category

Schedule 1.31

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = B - A
				2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1705.8728	TCK - Assembly Dry Cleaning	Option 1	Process Units	362,720	745,981	383,261
1705.8729	TCL - Assembly Final Inspection	Option 1	Process Units	2,008,889	1,275,021	(733,868)
1705.8730	TGJ - Reserve Pit	Option 1	Process Units	2,010,346	358,421	(1,651,925)
1705.8731	TCP - Assembly Dimensional Inspection	Option 1	Process Units	1,608,930	2,087,795	478,865
1705.8732	TGM - Assembly Mockup Loading	Option 1	Process Units	3,651,566	2,896,012	(755,554)
1705.8733	TGV - Assembly Mounting	Option 1	Process Units	1,300,960	817,271	(483,689)
1706.8734	PSE - Green Pellet Storage	Option 1	Process Units	2,995,385	7,725,288	4,729,903
1706.8735	PSF - Sintering Pellet Storage	Option 1	Process Units	3,059,559	7,545,089	4,485,530
1706.8736	PSI - Scrap Pellet Storage	Option 1	Process Units	2,962,771	8,326,080	5,363,309
1706.8737	PSJ - Ground & Sorted Pellet Storage	Option 1	Process Units	3,013,168	8,700,651	5,687,483
1707.8738	Lab Equip - LRD/LPG/LBT/LAC/KLN/KLL/KLK/KLH	Option 1	Process Units	5,107,852	9,269,740	4,161,888
1707.8739	Lab Equip - LME/LAU/FLT	Option 1	Process Units	2,536,095	5,505,154	2,969,059
1707.8740	Lab Equip - LSR/LCP/KLJ	Option 1	Process Units	6,615,656	10,858,433	4,242,777
1707.8741	Lab Equip - LPS/LET/LER/LDS/KLM/KLF/KLB/KLC/KLD	Option 1	Process Units	6,827,803	13,008,455	6,180,652
1707.8742	Lab Equip - KLO/KLI/KLG/KLA/KLE	Option 1	Process Units	7,139,421	10,325,401	3,185,980
1707.8743	Lab Equip - LSG/LLI	Option 1	Process Units	419,067	641,331	222,264
1707.8744	Lab Equip - LFX	Option 1	Process Units	1,409,182	2,368,710	959,528
1708.8745	DCE - PUO2 Buffer Storage	Option 1	Process Units	2,172,985	11,862,545	9,689,560
1708.8746	GDE - Rod Decladding	Option 1	Process Units	1,043,388	3,778,042	2,734,654
1708.8747	GME - Rod Cladding and Decontamination	Option 1	Process Units	8,888,637	26,508,613	17,619,976
1708.8748	PAD - Preplanning	Option 1	Process Units	594,028	2,114,547	1,520,519
1708.8749	PAR - Preplanning	Option 1	Process Units	555,296	2,046,442	1,491,146
1708.8750	PML - Pellet Handling	Option 1	Process Units	6,826,152	26,530,210	19,704,058
1708.8751	PQE - Quality Control & Manual Sorting	Option 1	Process Units	3,300,657	7,432,755	4,132,098
1708.8752	PRE - Pellet Grinding	Option 1	Process Units	2,839,088	7,040,991	4,201,903
1708.8753	PRF - Pellet Grinding	Option 1	Process Units	2,839,088	6,926,812	4,087,724
1708.8754	PTE - Pellet Inspection & Sorting	Option 1	Process Units	1,222,670	5,806,075	4,583,405
1708.8755	PTF - Pellet Inspection & Sorting	Option 1	Process Units	1,216,910	5,693,786	4,476,876
1709.8756	DDP - UO2 Drum Emptying	Option 1	Process Units	1,261,619	2,858,233	1,596,614
1709.8757	LCT - Test Line (part of laboratory)	Option 1	Process Units	2,615,834	3,074,651	458,817
1709.8758	NBX - Primary Blend Ball Milling	Option 1	Process Units	1,399,068	3,817,183	2,418,115
1709.8759	NBY - Scrap Ball Milling	Option 1	Process Units	1,399,068	3,233,671	1,834,603
1709.8760	NCR - Scrap Processing	Option 1	Process Units	5,294,395	9,035,233	3,740,838
1709.8761	NDD - PUO2 Can Receiving and Emptying	Option 1	Process Units	1,578,425	3,803,765	2,225,340
1709.8762	NDP - Primary Dosing	Option 1	Process Units	4,193,563	12,177,516	7,983,953
1709.8763	NDS - Final Dosing	Option 1	Process Units	5,122,007	15,225,662	10,103,655
1709.8764	NTM - Jar Storage and Handling	Option 1	Process Units	6,716,574	27,061,590	20,345,016
1709.8765	NXR - Powder Auxiliary	Option 1	Process Units	2,022,419	6,940,680	4,918,261
1710.8766	NPG - Homogenization & Pelletizing	Option 1	Process Units	3,917,028	14,407,626	10,490,598
1710.8767	NPH - Homogenization & Pelletizing	Option 1	Process Units	3,862,290	13,959,131	10,096,841
1710.8768	NPI - Homogenization & Pelletizing	Option 1	Process Units	3,873,576	2,312,137	(1,561,439)
1711.8769	KLA - Precipitation - Filtration - Oxidation	Option 1	Process Units	2,345,151	8,520,845	6,175,694
1711.8770	KCB GB1000 - Homogenization - Sampling	Option 1	Process Units	964,252	2,679,741	1,715,489
1711.8771	KDA - PUO2 Decanning	Option 1	Process Units	404,974	998,491	593,517
1711.8772	KDB - Dissolution	Option 1	Process Units	2,539,799	9,591,887	7,052,088
1711.8773	KDD - Dissolution of Chlorinated Feed	Option 1	Process Units	4,764,685	20,578,565	15,813,880
1711.8774	KDM - Pre-Polishing Milling (GB6400/7400)	Option 1	Process Units	786,781	1,380,592	593,811
1711.8775	KPA GB4000	Option 1	Process Units	1,928,637	3,378,746	1,450,109
1711.8776	KPB GB1000	Option 1	Process Units	681,155	1,777,821	1,096,666
1711.8777	KPG - Sampling Automatic	Option 1	Process Units	-	55,253	55,253

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				2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1711.8778	LLP - Pneumatic Transfer (33mm, PUO2 cans) Equipment	Option 1	Process Units	2,315,566	6,852,035	4,536,469
1711.8779	LTP - Pneumatic Transfer (76mm, PUO2 cans) Equipment	Option 1	Process Units	1,080,507	4,405,665	3,325,158
1711.8780	NTP - Pneumatic Transfer (133mm, PUO2 cans) Equipment	Option 1	Process Units	1,947,379	6,673,608	4,726,229
1712.8781	NPP - Additives Preparation	Option 1	Process Units	1,430,363	1,161,650	(268,713)
1712.8782	PFE/PFF - Sintering Furnace	Option 1	Process Units	24,950,333	71,472,962	46,522,629
1712.8783	TXE - Assembly Packaging	Option 1	Process Units	1,051,357	1,484,577	433,220
1712.8784	DRS - UO2 Receiving and Storage	Option 1	Process Units	152,633	-	(152,633)
1712.8786	PFF - Sintering Furnace	Option 1	Process Units	4	-	(4)
1713.8790	Process Unit Support	Option 1	Process Units	2,519,533	6,239,241	3,719,708
1713.8791	Assembly Suspense Accounts	Option 1	Process Units	-	-	-
1714.8708	KCD - Oxalic Mother Liquors Recovery Unit	Option 1	Process Units	857,872	742,665	(115,207)
1714.8709	KPA (GB2000, 2010, 3000, 8000, 8510) Purification Cycle	Option 1	Process Units	1,955,668	3,273,958	1,318,290
1714.8710	KPC - Nitric Acid Recovery Liquid Ring Pump GB	Option 1	Process Units	915,063	769,481	(145,582)
1714.8711	KWD - Aqueous Waste Reception	Option 1	Process Units	1,260,032	1,276,827	16,795
1714.8714	KPB (GB2000) Solvent Recovery Unit	Option 1	Process Units	406,920	564,199	157,279
1715.8716	DCP - PuO2 Receiving	Option 1	Process Units	-	157,000	157,000
1715.8718	VDQ Waste Storage	Option 1	Process Units	3,069,408	639	(3,068,769)
1715.8719	VDT Waste Nuclear Count - Drum Hdling & NDA P	Option 1	Process Units	889,899	4,468,007	3,578,108
1716.8791	Assembly BOAs Accounts	Option 1	Process Units	10,629,229	50,274,011	39,644,782
1716.8795	Long Lead Procurements	Option 1	Process Units	16,050,885	49,105,674	33,054,789
1716.8796	ATG Spares Procurements	Option 1	Process Units	4,825,240	5,187,473	362,233
1717.8792	Self-Perform Suspense Accounts	Option 1	Process Units	318,024	726,190	408,166
1717.8793	Design Modifications	Option 1	Process Units	-	373,013	373,013
1717.8797	Unexpected Outsource Costs	Option 1	Process Units	-	192,886	192,886
1717.8798	Duty and Shipping Costs	Option 1	Process Units	-	2,461,227	2,461,227
1717.8799	REA Exposure	Option 1	Process Units	-	-	-
1717.87MA	Maintenance Program, Layup/In-Storage	Option 1	Process Units	-	340,078	340,078
1745.4500	MP Dismantling Units	Option 1	Process Units	-	-	-
1745.4510	MP Receiving & Storage Units	Option 1	Process Units	-	-	-
1745.4520	MP Ball Milling & Pneumatic Transfers	Option 1	Process Units	-	-	-
1745.4530	MP Sintering Furnances	Option 1	Process Units	1,133,724	-	(1,133,724)
1745.4540	MP Powder & Pellets	Option 1	Process Units	-	-	-
1745.4550	MP Pellet Storage	Option 1	Process Units	-	-	-
1745.4570	MP Rods & Assemblies	Option 1	Process Units	-	-	-
1745.4580	MP Assembly Packaging Crane	Option 1	Process Units	-	-	-
1745.4590	MP Laboratories	Option 1	Process Units	-	-	-
Process Units - Direct Subtotal				\$ 345,543,884	\$ 858,791,412	\$ 513,247,529
0601.6000	Project Office Operations	Option 1	Hotel Load	\$ 6,428,099	\$ 9,225,064	\$ 2,796,965
0601.6001	Communications	Option 1	Hotel Load	4,046,177	7,137,056	3,090,879
0601.6002	Special Projects	Option 1	Hotel Load	209,586	9,995,270	9,785,684
0601.6003	Employee Incentive Program	Option 1	Hotel Load	-	113	113
0601.6004	Project Off-Site Operations	Option 1	Hotel Load	2,145,784	11,006,133	8,860,349
0601.6005	Projects Oversight	Option 1	Hotel Load	6,630,465	16,667,313	10,036,848
0601.6009	Relocations	Option 1	Hotel Load	10,730,106	38,306,079	27,575,973
0602.6010	Project Controls	Option 1	Hotel Load	23,119,500	42,470,552	19,351,052
0602.6011	Risk Management	Option 1	Hotel Load	891,857	753,578	(138,279)
0603.6020	QA Program Management & Administration	Option 1	Hotel Load	1,451,615	1,437,299	(14,316)
0603.6021	Quality Engineering	Option 1	Hotel Load	2,718,261	2,861,506	143,245
0603.6022	Audit & Surveillance	Option 1	Hotel Load	1,379,395	1,363,028	(16,367)

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0603.6023	Quality Control - Labor	Option 1	Hotel Load	2,177,354	2,400,403	223,049
0603.6024	QA / QC Assembly Group Support	Option 1	Hotel Load	775,405	536,953	(238,452)
0603.6025	MOX Potential Back Charges	Option 1	Hotel Load	-	222,526	222,526
0604.6030	PS&A Administrative Support	Option 1	Hotel Load	12,594,428	40,294,967	27,700,539
0604.6031	Human Resources	Option 1	Hotel Load	15,162,029	25,211,837	10,049,808
0604.6032	Training	Option 1	Hotel Load	8,271,079	20,542,206	12,271,127
0604.6033	Information and Personnel Security	Option 1	Hotel Load	8,404,946	18,575,630	10,170,684
0604.6034	Record Center	Option 1	Hotel Load	7,802,523	14,391,158	6,588,634
0604.6035	Internal Communication	Option 1	Hotel Load	(412,642)	134,969	547,611
0604.6036	Accounting, Treasury & Invoice Operations	Option 1	Hotel Load	12,049,569	24,577,396	12,527,827
0604.6037	Asset Management	Option 1	Hotel Load	359,916	359,715	(201)
0604.6038	Facility Management	Option 1	Hotel Load	3,635,905	22,202,181	18,566,276
0604.6039	Facility - Mini-MAC Building	Option 1	Hotel Load	-	123,501	123,501
0604.6042	PERC\$	Option 1	Hotel Load	-	818,632	818,632
0604.6045	Gateway Project	Option 1	Hotel Load	(20,000)	738,370	758,370
0604.6046	Shaw Nuclear Exchange	Option 1	Hotel Load	20,000	-	(20,000)
0604.6047	Legal Expenses	Option 1	Hotel Load	8,462,852	15,505,975	7,043,123
0604.6048	EMC Corporation Matter	Option 1	Hotel Load	1,555	1,557	2
0604.6049	952.204-77 Comp Security	Option 1	Hotel Load	873	699	(174)
0605.6040	Contract Management & Administration	Option 1	Hotel Load	16,584,091	18,569,434	1,985,343
0606.6050	Procurement	Option 1	Hotel Load	3,725,526	8,809,637	5,084,111
0606.6051	Infrastructure Procurement	Option 1	Hotel Load	4,192,508	6,141,727	1,949,219
0606.6052	Construction Procurement	Option 1	Hotel Load	5,389,184	14,836,392	9,447,208
0606.6053	Process Equipment Procurement	Option 1	Hotel Load	8,811,049	16,683,838	7,872,789
0606.6054	Process Unit Procurement	Option 1	Hotel Load	433,523	464,936	31,413
0606.6055	Property Management	Option 1	Hotel Load	4,412,654	5,335,247	922,593
0606.6056	Employment Eligibility Verifications	Option 1	Hotel Load	2,400	851	(1,549)
0606.6057	Engineered Equipment Group	Option 1	Hotel Load	498,087	8,256,992	7,758,905
0606.6058	Procurement Corrective Action NRC Commercial Grade Dedication	Option 1	Hotel Load	-	-	-
0606.6059	Procurement Support Services	Option 1	Hotel Load	-	4,960,099	4,960,099
0606.6068	S&R and Warehouses	Option 1	Hotel Load	-	31,678,298	31,678,298
0606.6069	Materials Management	Option 1	Hotel Load	227,994	5,942,192	5,714,198
0607.6060	IT Support	Option 1	Hotel Load	9,194,965	47,929,477	38,734,512
0607.6061	IT Other Direct Costs (ODCs)	Option 1	Hotel Load	15,366,220	57,883,204	42,516,984
0607.6062	Team Center Initiative	Option 1	Hotel Load	1,999,755	2,116,187	116,432
0611.6000	Project Office Operations	Option 1	Hotel Load	-	833,463	833,463
0611.6001	Communications	Option 1	Hotel Load	-	1,164,936	1,164,936
0611.6002	Special Projects	Option 1	Hotel Load	-	1,270,591	1,270,591
0611.6004	Project Off-Site Operations	Option 1	Hotel Load	-	1,224,027	1,224,027
0611.6005	Projects Oversight	Option 1	Hotel Load	-	1,716,325	1,716,325
0611.6009	Relocations	Option 1	Hotel Load	-	1,138,970	1,138,970
0611.6090	Project Systems Assessment - NNSA (OPC)	Option 1	Hotel Load	500,002	239,770	(260,232)
0611.6091	EVMS Process Improvements Development ODC (OPC)	Option 1	Hotel Load	-	18,475	18,475
0612.6010	Project Controls	Option 1	Hotel Load	-	2,913,451	2,913,451
0614.6030	Program Support and Legal Administration	Option 1	Hotel Load	-	4,555,007	4,555,007
0614.6031	Human Resources	Option 1	Hotel Load	-	493,111	493,111
0614.6032	Training	Option 1	Hotel Load	-	3,519,268	3,519,268
0614.6034	Record Center	Option 1	Hotel Load	-	1,300,316	1,300,316
0614.6036	Accounting, Treasury & Invoice Operations	Option 1	Hotel Load	-	2,876,441	2,876,441
0614.6038	Facility Management	Option 1	Hotel Load	-	1,507,135	1,507,135

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				2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
0614.6047	Legal Expenses	Option 1	Hotel Load	-	1,665,825	1,665,825
0615.6040	Contract Management & Administration	Option 1	Hotel Load	-	2,043,913	2,043,913
0616.6050	Procurement	Option 1	Hotel Load	-	721,704	721,704
0616.6051	Infrastructure Procurement	Option 1	Hotel Load	-	532,976	532,976
0616.6052	Construction Procurement	Option 1	Hotel Load	-	1,654,810	1,654,810
0616.6053	Process Equipment Procurement	Option 1	Hotel Load	-	290,251	290,251
0616.6055	Property Management	Option 1	Hotel Load	-	1,305,869	1,305,869
0616.6057	Engineered Equipment Group	Option 1	Hotel Load	-	569,012	569,012
0616.6059	Procurement Support Services	Option 1	Hotel Load	-	412,851	412,851
0616.6068	S&R and Warehouses	Option 1	Hotel Load	-	1,319,145	1,319,145
0616.6069	Materials Management	Option 1	Hotel Load	-	510,097	510,097
0617.6060	IT Support	Option 1	Hotel Load	-	6,586,251	6,586,251
0617.6061	IT Other Direct Costs (ODCs)	Option 1	Hotel Load	-	4,239,122	4,239,122
1000.8001	Management / Admin	Option 1	Hotel Load	8,574,626	20,831,188	12,256,562
1000.8002	Engineering Services Project Controls	Option 1	Hotel Load	3,588,904	9,548,015	5,959,111
1000.8003	Engineering Assurance	Option 1	Hotel Load	2,053,124	8,647,662	6,594,538
1000.8004	Technical Coordination	Option 1	Hotel Load	3,098,008	6,527,963	3,429,955
1000.8005	Document Management	Option 1	Hotel Load	819,754	3,991,953	3,172,199
1000.8006	Engineering Training	Option 1	Hotel Load	3,524,187	10,658,836	7,134,649
1001.8011	Business Travel	Option 1	Hotel Load	4,166,588	3,999,996	(166,592)
1001.8012	Temporary Assignments	Option 1	Hotel Load	125,319	10,500,723	10,375,404
1001.8019	Other ODCs	Option 1	Hotel Load	8,701,700	7,620,090	(1,081,610)
1002.8021	Supervision / Admin	Option 1	Hotel Load	1,359,305	1,349,621	(9,684)
1002.8022	Chemical	Option 1	Hotel Load	342,612	475,791	133,179
1002.8023	Mechanical	Option 1	Hotel Load	173,705	13,083	(160,622)
1002.8024	Laboratory	Option 1	Hotel Load	104,196	60,629	(43,567)
1002.8025	Balance of Plant (BOP)	Option 1	Hotel Load	21,323	37,924	16,601
1002.8026	Safety	Option 1	Hotel Load	158,936	73,015	(85,921)
1002.8027	Reference Plant Support	Option 1	Hotel Load	26,905	105,977	79,072
1003.8031	Supervision / Admin	Option 1	Hotel Load	5,030,543	4,537,192	(493,351)
1003.8032	Civil / Structural	Option 1	Hotel Load	2,691,947	40,575,130	37,883,183
1003.8034	Electrical / I&C Site Construction Support	Option 1	Hotel Load	4,801,717	29,183,333	24,381,617
1003.8035	Chemical-Construction Support	Option 1	Hotel Load	3,116,751	18,628,193	15,511,442
1003.8036	Mechanical – Construction Support	Option 1	Hotel Load	2,862,224	8,527,568	5,665,344
1003.8037	Plant Configuration Site Construction Support	Option 1	Hotel Load	5,465,749	9,041,717	3,575,968
1003.8038	Engineering Mechanics - Site Construction Support	Option 1	Hotel Load	1,588,640	20,330,086	18,741,446
1003.8042	Civil / Structural	Option 1	Hotel Load	-	-	-
1004.8041	Supervision / Admin	Option 1	Hotel Load	1,729,643	1,905,609	175,966
1004.8042	Civil / Structural	Option 1	Hotel Load	1,876,517	1,474,971	(401,547)
1004.8044	Electrical / I&C Procurement and Fabrication Support	Option 1	Hotel Load	1,194,353	2,595,894	1,401,541
1004.8046	Chemical-Procurement/Fabrication Support	Option 1	Hotel Load	6,775,218	19,644,386	12,869,168
1004.8047	Mechanical – Procurement/Fabrication Support	Option 1	Hotel Load	664,828	1,304,971	640,143
1004.8048	Plant Configuration - Construction, Procurement & Fabrication Support	Option 1	Hotel Load	2,982,901	5,747,615	2,764,714
1004.8049	Equipment Qualification	Option 1	Hotel Load	4,957,698	9,389,180	4,431,482
1005.8051	Supervision / Admin	Option 1	Hotel Load	1,046,687	649,247	(397,440)
1005.8052	Mechanical – Startup & Operations Support	Option 1	Hotel Load	4,210,942	189,407	(4,021,535)
1005.8053	Electrical / IC Startup and Operations Support	Option 1	Hotel Load	6,866,646	3,112,993	(3,753,653)
1005.8054	Civil/ Structural Startup Support	Option 1	Hotel Load	644,131	-	(644,131)
1005.8055	Engineering Mechanics Startup Support	Option 1	Hotel Load	786,719	-	(786,719)
1005.8057	Chemical/Mechanical Engineering Startup Support	Option 1	Hotel Load	2,039,416	548,121	(1,491,295)

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1005.8058	Software Modifications	Option 1	Hotel Load	11,589,148	9,113	(11,580,035)
1005.8059	Plant Configuration	Option 1	Hotel Load	4,033,678	-	(4,033,678)
1006.8001	Management / Admin ODC	Option 1	Hotel Load	-	1,407,038	1,407,038
1006.8002	Project Controls OPC	Option 1	Hotel Load	-	262,767	262,767
1006.8003	Engineering Assurance ODC	Option 1	Hotel Load	-	446,932	446,932
1006.8005	Document Management	Option 1	Hotel Load	-	169,402	169,402
1006.8006	Engineering Training	Option 1	Hotel Load	-	131,226	131,226
1006.8011	Business Travel	Option 1	Hotel Load	-	5,563	5,563
1006.8049	Engineering Mechanics	Option 1	Hotel Load	-	925,155	925,155
1006.8052	Process Unit Responsible Engineer Startup Support	Option 1	Hotel Load	-	3,949,689	3,949,689
1006.8053	Electrical / IC Startup Support	Option 1	Hotel Load	-	3,540,890	3,540,890
1006.8054	Civil/ Structural Startup Support	Option 1	Hotel Load	-	1,226,667	1,226,667
1006.8055	Engineering Mechanics Startup Support	Option 1	Hotel Load	-	1,721,000	1,721,000
1006.8057	Chemical/ Mechanical Engineering Startup Support	Option 1	Hotel Load	-	5,571,346	5,571,346
1006.8059	Plant Configuration	Option 1	Hotel Load	-	1,136,403	1,136,403
1100.8101	Management / Administration	Option 1	Hotel Load	1,496,757	2,227,893	731,136
1100.8102	NSA Project Controls	Option 1	Hotel Load	1,026,391	1,491,371	464,980
1101.8111	Business Travel	Option 1	Hotel Load	947,994	504,806	(443,188)
1101.8112	Temporary Assignments	Option 1	Hotel Load	178,491	55,790	(122,701)
1101.8119	Other ODCs (Legal & S/C Costs)	Option 1	Hotel Load	1,470,334	1,622,276	151,942
1102.8121	Defense of Licensing Basis	Option 1	Hotel Load	7,263,816	11,460,643	4,196,827
1102.8122	Compliance Program	Option 1	Hotel Load	3,412,700	2,054,829	(1,357,871)
1102.8123	Condition Reports Work Resolution	Option 1	Hotel Load	-	205,042	205,042
1103.8132	Chemical Safety Support	Option 1	Hotel Load	971,851	4,012,744	3,040,893
1103.8133	Laboratory Support	Option 1	Hotel Load	332,617	210,173	(122,444)
1104.8141	ES&H Program	Option 1	Hotel Load	219,560	1,229,596	1,010,036
1104.8142	Radiological Protection	Option 1	Hotel Load	13,298	5,869	(7,429)
1104.8143	Environmental Protection Program	Option 1	Hotel Load	713,022	823,040	110,018
1104.8144	Industrial Safety Program	Option 1	Hotel Load	380,343	638,299	257,956
1104.8145	Waste Management Program	Option 1	Hotel Load	(50,533)	334,145	384,678
1104.8146	Fitness for Duty Program	Option 1	Hotel Load	(216,463)	515,082	731,545
1104.8147	Emergency Response Program	Option 1	Hotel Load	80,657	94,698	14,041
1104.8148	Employee Safety Incentive Program	Option 1	Hotel Load	81,139	79,977	(1,162)
1104.8149	Construction - Safety Engineering Support	Option 1	Hotel Load	233,618	459,000	225,382
1105.8151	Criticality Safety Procurement & Const Support	Option 1	Hotel Load	81,672	4,035,676	3,954,004
1105.8154	Nuclear Radiation Protections	Option 1	Hotel Load	73,973	2,291,377	2,217,404
1105.8155	Nuclear Radiation & Criticality Monitoring	Option 1	Hotel Load	-	1,793	1,793
1106.8161	Defense of the Safety Basis	Option 1	Hotel Load	1,367,960	4,087,071	2,719,111
1109.8191	NRC Costs	Option 1	Hotel Load	18,764,920	57,777,922	39,013,002
1109.8192	Physical Security Program	Option 1	Hotel Load	75,562,597	12,193,107	(63,369,490)
1109.8193	Material Control & Accountability Program	Option 1	Hotel Load	13,490,799	13,452,777	(38,022)
1110.8101	Management / Administration	Option 1	Hotel Load	-	226,869	226,869
1110.8102	Project Controls	Option 1	Hotel Load	-	102,632	102,632
1112.8121	Defense of Licensing Basis	Option 1	Hotel Load	-	1,524,420	1,524,420
1113.8132	Chemical Safety Support	Option 1	Hotel Load	-	567,575	567,575
1115.8151	Criticality Safety Procurement & Const Support	Option 1	Hotel Load	-	951,357	951,357
1115.8154	Nuclear Radiation Protections	Option 1	Hotel Load	-	329,182	329,182
1116.8161	Defense of the Safety Basis	Option 1	Hotel Load	-	493,859	493,859
1802.8820	Supplies & Services	Option 1	Hotel Load	354,576	2,167,694	1,813,118
1802.8821	Office Equipment, Furniture Leases & Purchases	Option 1	Hotel Load	2,924,041	4,278,754	1,354,713

CB&I AREVA MOX Services, LLC.
MFFF Project Cost Growth by Cost Account and Claim Category

Schedule 1.31

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = B - A
				2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1803.8830	Temporary Site Features & Services	Option 1	Hotel Load	128,086	518,980	390,894
1803.8832	Buildings Shops / Trailers	Option 1	Hotel Load	15,839,261	22,521,397	6,682,136
1803.8833	Utilities & Services	Option 1	Hotel Load	14,684,284	45,585,905	30,901,621
1803.8850	Misc Field Construction Supplies	Option 1	Hotel Load	-	-	-
1804.8840	Equipment	Option 1	Hotel Load	12,689,446	43,706,780	31,017,334
1804.8842	Construction Materials Management	Option 1	Hotel Load	209,481	5,794,327	5,584,846
1804.8843	Tools	Option 1	Hotel Load	223,651	754,407	530,756
1804.8850	Temporary Site Features & Services	Option 1	Hotel Load	-	-	-
1805.8850	Miscellaneous Field Supplies & Services	Option 1	Hotel Load	17,474,277	72,941,704	55,467,427
1805.8851	Foreign National Escorts	Option 1	Hotel Load	3,240,702	-	(3,240,702)
2000.9001	Management / Administration	Option 1	Hotel Load	7,999,319	12,719,516	4,720,197
2000.9002	Project Controls	Option 1	Hotel Load	1,319,146	1,844,714	525,568
2001.9014	Test Equipment & Consumables	Option 1	Hotel Load	1,762,350	1,910,308	147,958
2002.9021	Generic Test Documents	Option 1	Hotel Load	80,437	143,702	63,265
2002.9024	Technical Support	Option 1	Hotel Load	-	139,892	139,892
2002.9026	Cold Startup Training	Option 1	Hotel Load	1,348,758	1,211,069	(137,689)
2004.9047	Turnover & Logistics	Option 1	Hotel Load	-	2,852,716	2,852,716
2006.9060	Maintenance Program, Layup/In-Storage	Option 1	Hotel Load	-	4,473,849	4,473,849
2010.9101	Management / Administration - IPT	Option 1	Hotel Load	-	31,409,273	31,409,273
2010.9102	Project Controls - IPT	Option 1	Hotel Load	-	4,389,193	4,389,193
2010.9103	Program Support for Start-up	Option 1	Hotel Load	-	3,425,955	3,425,955
2011.9117	Spare Parts - IPT	Option 1	Hotel Load	-	3,630,728	3,630,728
2012.9124	Technical Support - IPT	Option 1	Hotel Load	-	2,130,381	2,130,381
2012.9126	Cold Startup Training - IPT	Option 1	Hotel Load	-	6,130,662	6,130,662
2100.9501	Management / Administration	Option 1	Hotel Load	22,539,333	22,482,010	(57,323)
2100.9502	Project Controls	Option 1	Hotel Load	3,957,266	4,341,736	384,470
2100.9503	Quality Assurance	Option 1	Hotel Load	-	-	-
2100.9504	Environment, Safety & Health	Option 1	Hotel Load	-	-	-
2100.9506	PS&A	Option 1	Hotel Load	(0)	-	0
2101.9511	Business Travel	Option 1	Hotel Load	2,134,842	2,028,587	(106,255)
2101.9512	Temporary Assignments	Option 1	Hotel Load	3,183,717	6,462,252	3,278,535
2101.9515	Consumables	Option 1	Hotel Load	-	2,438,200	2,438,200
2101.9518	Software	Option 1	Hotel Load	4,114,132	3,954,314	(159,818)
2102.9522	Training at Richland	Option 1	Hotel Load	2,863,086	1,182,981	(1,680,105)
2102.9523	Training at LaHague	Option 1	Hotel Load	48,189,683	3,675,088	(44,514,595)
2102.9524	Training at Melox	Option 1	Hotel Load	64,791,905	5,648,433	(59,143,472)
2102.9525	Other Training	Option 1	Hotel Load	66,704,236	85,723	(66,618,513)
2102.9526	Operations Activities	Option 1	Hotel Load	(1,222,760)	157,198	1,379,958
2102.9527	Operations Process Simulator	Option 1	Hotel Load	8,646,253	1,584,317	(7,061,936)
2102.9528	Reference Plant Training Direct Costs	Option 1	Hotel Load	(8,646,253)	108,059,327	116,705,580
2103.9531	Organizational Documents	Option 1	Hotel Load	1,141,455	4,215,983	3,074,528
2103.9532	Laboratory Procedures	Option 1	Hotel Load	4,252,295	2,677,948	(1,574,347)
2103.9533	Maintenance Procedures	Option 1	Hotel Load	4,612,425	4,593,634	(18,791)
2103.9534	Operating Procedures	Option 1	Hotel Load	10,763,793	8,148,158	(2,615,635)
2103.9535	Hot Startup Planning	Option 1	Hotel Load	373,242	1,121,733	748,491
2103.9536	Turnover to Operations	Option 1	Hotel Load	454,344	-	(454,344)
2103.9537	Support to Other groups	Option 1	Hotel Load	920,976	7,136,528	6,215,552
2104.9541	Early Option 2 Proposal Development (Labor)	Option 1	Hotel Load	-	672,700	672,700
2105.9550	Aqueous Polishing Activities	Option 1	Hotel Load	259,640	3,216,088	2,956,448
2105.9551	Powder Pellet Activities	Option 1	Hotel Load	173,085	6,619,357	6,446,272

CB&I AREVA MOX Services, LLC.
MFFF Project Cost Growth by Cost Account and Claim Category

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Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = B - A
				2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
2105.9552	Rod Bundle Activities	Option 1	Hotel Load	129,730	2,473,008	2,343,278
2105.9553	Balance of Plant Activities	Option 1	Hotel Load	167,995	6,595,420	6,427,425
2105.9554	Laboratory Activities	Option 1	Hotel Load	-	14,901,345	14,901,345
2105.9555	Maintenance Activities	Option 1	Hotel Load	320,048	31,130,877	30,810,829
2105.9556	Logistics / Warehousing	Option 1	Hotel Load	-	2,675,586	2,675,586
2105.9557	System Engineering Activities	Option 1	Hotel Load	172,262	12,540,813	12,368,551
2201.8138	Relocation	Option 1	Hotel Load	-	20,912	20,912
2201.8141	ES&H Program	Option 1	Hotel Load	1,473,688	8,149,431	6,675,743
2201.8143	Environmental Protection Program	Option 1	Hotel Load	1,134,848	5,433,744	4,298,896
2201.8144	Industrial Safety Program	Option 1	Hotel Load	995,294	930,909	(64,385)
2201.8145	Waste Management Program	Option 1	Hotel Load	924,451	3,318,918	2,394,467
2201.8146	Fitness for Duty Program	Option 1	Hotel Load	1,836,793	1,379,366	(457,427)
2201.8147	Emergency Preparedness Program	Option 1	Hotel Load	1,565,817	1,640,343	74,526
2201.8148	Employee Safety Incentive Program	Option 1	Hotel Load	519,249	1,053,890	534,641
2201.8149	ES & H Safety Engineer	Option 1	Hotel Load	1,783,459	11,290,726	9,507,267
2201.8150	Field Office Supplies	Option 1	Hotel Load	-	5,499	5,499
2201.8820	Field Office Supplies	Option 1	Hotel Load	171,293	90,217	(81,076)
2202.8141	ES&H Program	Option 1	Hotel Load	-	1,232,710	1,232,710
2202.8143	Environmental Protection Program	Option 1	Hotel Load	-	949,660	949,660
2202.8145	Waste Management Program	Option 1	Hotel Load	-	693,898	693,898
2202.8147	Emergency Response Program	Option 1	Hotel Load	-	599,081	599,081
2202.8148	Employee Safety Incentive Program	Option 1	Hotel Load	-	177,741	177,741
2202.8149	ES & H Safety Engineer	Option 1	Hotel Load	-	2,101,834	2,101,834
2202.9504	Radiological Protection Early Start Up	Option 1	Hotel Load	15,267,591	15,591,116	323,525
Process Units - Hotel Load Subtotal				\$ 799,014,425	\$ 1,612,646,690	\$ 813,632,265
1000.8037	Mechanical – Construction Support	Option 1	MFFF Construction - Title III Engineering	\$ -	\$ -	\$ -
1003.8032	Civil / Structural	Option 1	MFFF Construction - Title III Engineering	3,786,460	21,309,941	17,523,481
1003.8034	Electrical / I&C Site Construction Support	Option 1	MFFF Construction - Title III Engineering	9,085,875	26,236,366	17,150,490
1003.8035	Chemical-Construction Support	Option 1	MFFF Construction - Title III Engineering	4,589,292	7,654,227	3,064,935
1003.8036	Mechanical – Construction Support	Option 1	MFFF Construction - Title III Engineering	1,259,111	5,993,434	4,734,323
1003.8037	Plant Configuration Site Construction Support	Option 1	MFFF Construction - Title III Engineering	11,694,072	24,406,806	12,712,734
1003.8038	Engineering Mechanics - Site Construction Support	Option 1	MFFF Construction - Title III Engineering	1,100,594	1,889,064	788,470
1004.8040	Responsible Engineer Process Unit Fabrication Support	Option 1	MFFF Construction - Title III Engineering	-	-	-
1004.8044	Electrical / I&C Procurement and Fabrication Support	Option 1	MFFF Construction - Title III Engineering	(145,000)	2,589	147,589
1004.8046	Chemical-Procurement/Fabrication Support	Option 1	MFFF Construction - Title III Engineering	(474,839)	3,032,980	3,507,819
1004.8047	Mechanical – Procurement/Fabrication Support	Option 1	MFFF Construction - Title III Engineering	324,345	319,072	(5,273)
1005.8052	Mechanical – Startup & Operations Support	Option 1	MFFF Construction - Title III Engineering	1,090,249	300,099	(790,150)
1005.8053	Electrical / IC Startup and Operations Support	Option 1	MFFF Construction - Title III Engineering	366,145	-	(366,145)
1005.8054	Civil/ Structural Startup Support	Option 1	MFFF Construction - Title III Engineering	-	-	-
1005.8057	Chemical/Mechanical Engineering Startup Support	Option 1	MFFF Construction - Title III Engineering	272,356	120,575	(151,781)
1007.8071	Chemical Related Engineered Equipment	Option 1	MFFF Construction - Title III Engineering	-	-	-
1007.8072	Electrical Related Engineered Equipment	Option 1	MFFF Construction - Title III Engineering	-	-	-
1007.8073	Instrumentation & Control Related Engineered Equipment	Option 1	MFFF Construction - Title III Engineering	-	-	-
1007.8074	HVAC Related Engineered Equipment	Option 1	MFFF Construction - Title III Engineering	-	-	-
1007.8075	Miscellaneous Engineered Equipment	Option 1	MFFF Construction - Title III Engineering	-	-	-
MFFF Construction - Title III Engineering Subtotal				\$ 32,948,661	\$ 91,265,151	\$ 58,316,491
1721.2101	Site Preparation	Option 1	MFFF Construction - Installation/Materials	\$ 29,136,316	\$ 29,492,485	\$ 356,169
1722.2201	Roads & Parking	Option 1	MFFF Construction - Installation/Materials	1,853,353	1,770,466	(82,887)

CB&I AREVA MOX Services, LLC.
MFFF Project Cost Growth by Cost Account and Claim Category

Schedule 1.31

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = B - A
				2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1722.2202	F" Road"	Option 1	MFFF Construction - Installation/Materials	5,529,770	3,767,924	(1,761,846)
1723.2301	Yard Structures	Option 1	MFFF Construction - Installation/Materials	2,222,753	3,861,339	1,638,586
1723.2501		Option 1	MFFF Construction - Installation/Materials	-	-	-
1724.2401	Underground Utilities	Option 1	MFFF Construction - Installation/Materials	10,809,194	21,315,647	10,506,454
1725.2501	Yard Fire Protection	Option 1	MFFF Construction - Installation/Materials	2,374,082	3,091,847	717,765
1726.2601	Chillers	Option 1	MFFF Construction - Installation/Materials	3,996,349	6,597,688	2,601,339
1727.2701	Site Security and Perimeter Intrusion Detection and Assessment Syste	Option 1	MFFF Construction - Installation/Materials	33,756,358	46,557,859	12,801,501
1728.2801	Yard Electrical & Lighting	Option 1	MFFF Construction - Installation/Materials	6,479,079	6,076,996	(402,083)
1729.2901	Landscaping	Option 1	MFFF Construction - Installation/Materials	438,164	334,321	(103,843)
1731.3150	Administration Building	Option 1	MFFF Construction - Installation/Materials	8,158,478	11,047,671	2,889,193
1732.3250	Receiving Warehouse Building	Option 1	MFFF Construction - Installation/Materials	2,342,535	1,257,230	(1,085,305)
1732.3550	Standby Diesel Generator Building	Option 1	MFFF Construction - Installation/Materials	1	-	(1)
1733.3350	Secured Warehouse Building	Option 1	MFFF Construction - Installation/Materials	3,768,379	4,429,712	661,333
1734.3450	Tech Support & Access Control Building	Option 1	MFFF Construction - Installation/Materials	7,129,799	20,551,164	13,421,365
1735.3550	Standby Diesel Generator Building	Option 1	MFFF Construction - Installation/Materials	3,573,745	-	(3,573,745)
1735.3556	Standby Diesel Generator System/Equip.	Option 1	MFFF Construction - Installation/Materials	-	-	-
1736.3652	Civil / Structural / Architectural	Option 1	MFFF Construction - Installation/Materials	1,234,783	12,694,518	11,459,735
1736.3653	Mechanical / Piping	Option 1	MFFF Construction - Installation/Materials	1,519,602	5,681,459	4,161,857
1736.3654	Electrical	Option 1	MFFF Construction - Installation/Materials	2,419,944	12,245,457	9,825,513
1736.3655	I&C	Option 1	MFFF Construction - Installation/Materials	386,727	672,465	285,738
1736.3656	Emerg.Diesel Gen.System/Equipment	Option 1	MFFF Construction - Installation/Materials	7,797,805	10,668,334	2,870,529
1737.3751	MFFF Construction - Installation/Materials	Option 1	MFFF Construction - Installation/Materials	1,400,000	3,061,059	1,661,059
1737.3752	Civil / Structural / Architectural	Option 1	MFFF Construction - Installation/Materials	1,852,989	2,335,417	482,428
1737.3753	Mechanical / Piping	Option 1	MFFF Construction - Installation/Materials	7,584,611	2,577,658	(5,006,953)
1737.3754	Electrical	Option 1	MFFF Construction - Installation/Materials	3,535,409	916,676	(2,618,733)
1737.3755	I&C	Option 1	MFFF Construction - Installation/Materials	5,243,898	58,855	(5,185,043)
1737.3756	Reagent Systems Equipment / Piping	Option 1	MFFF Construction - Installation/Materials	824,061	9,741,737	8,917,676
1741.4100	Building Structure	Option 1	MFFF Construction - Installation/Materials	42,141,101	48,980,823	6,839,722
1741.4110	Architectural Features	Option 1	MFFF Construction - Installation/Materials	1,286,559	12,573,673	11,287,114
1741.4120	HVAC	Option 1	MFFF Construction - Installation/Materials	5,143,021	36,376,411	31,233,390
1741.4130	MOX Processing Area (BMP) – MOX Processing Area – Level 1 – Fire Pro	Option 1	MFFF Construction - Installation/Materials	5,210,678	12,698,949	7,488,272
1741.4140	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	4,467,807	2,083,905	(2,383,902)
1741.4150	Process Piping	Option 1	MFFF Construction - Installation/Materials	14,137,249	17,941,478	3,804,229
1741.4170	Other Equipment	Option 1	MFFF Construction - Installation/Materials	7,913,483	7,094,780	(818,703)
1741.4180	Electrical	Option 1	MFFF Construction - Installation/Materials	12,710,594	47,210,472	34,499,878
1741.4190	Instrumentation	Option 1	MFFF Construction - Installation/Materials	13,114,418	2,734,549	(10,379,870)
1742.4200	Building Structure	Option 1	MFFF Construction - Installation/Materials	22,770,514	35,620,852	12,850,338
1742.4210	Architectural Features	Option 1	MFFF Construction - Installation/Materials	(191,335)	4,607,399	4,798,734
1742.4220	HVAC	Option 1	MFFF Construction - Installation/Materials	7,638,103	20,971,266	13,333,163
1742.4230	MOX Processing Area (BMP) – MOX Processing Area – Level 2 – Fire Pro	Option 1	MFFF Construction - Installation/Materials	6,021,572	14,596,534	8,574,962
1742.4240	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	1,220,714	42,641	(1,178,073)
1742.4250	Process Piping	Option 1	MFFF Construction - Installation/Materials	7,971,156	11,361,603	3,390,447
1742.4270	Other Equipment	Option 1	MFFF Construction - Installation/Materials	2,454,660	2,570,349	115,689
1742.4280	Electrical	Option 1	MFFF Construction - Installation/Materials	14,912,858	29,359,393	14,446,535
1742.4290	Instrumentation	Option 1	MFFF Construction - Installation/Materials	7,707,535	1,728,847	(5,978,688)
1742.4600	Fuel Assembly / Rods	Option 1	MFFF Construction - Installation/Materials	(167)	-	167
1743.4300	Building Structure	Option 1	MFFF Construction - Installation/Materials	-	28,748,394	28,748,394
1743.4310	Architectural Features	Option 1	MFFF Construction - Installation/Materials	215,717	5,178,527	4,962,810
1743.4320	HVAC	Option 1	MFFF Construction - Installation/Materials	15,793,051	36,243,152	20,450,100
1743.4330	MOX Processing Area (BMP) – MOX Processing Area – Level 3 – Fire Pro	Option 1	MFFF Construction - Installation/Materials	6,408,576	9,592,492	3,183,916

CB&I AREVA MOX Services, LLC.
MFFF Project Cost Growth by Cost Account and Claim Category

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Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = B - A
				2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1743.4340	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	1,757,160	104,868	(1,652,292)
1743.4350	Process Piping	Option 1	MFFF Construction - Installation/Materials	14,311,410	14,276,183	(35,227)
1743.4370	Other Equipment	Option 1	MFFF Construction - Installation/Materials	114,045	1,178,593	1,064,548
1743.4380	Electrical	Option 1	MFFF Construction - Installation/Materials	14,716,737	33,580,847	18,864,110
1743.4390	Instrumentation	Option 1	MFFF Construction - Installation/Materials	18,198,930	19,678,197	1,479,267
1744.4400	Building Structure	Option 1	MFFF Construction - Installation/Materials	837,780	12,198,268	11,360,488
1744.4410	Architectural Features	Option 1	MFFF Construction - Installation/Materials	79,148	-	(79,148)
1744.4420	HVAC	Option 1	MFFF Construction - Installation/Materials	353,456	2,882,398	2,528,942
1744.4430	MOX Processing Area (BMP) – MOX Processing Area – Level 4 – Fire Pr	Option 1	MFFF Construction - Installation/Materials	249,976	83,530	(166,446)
1744.4440	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	581,867	610,698	28,831
1744.4480	Electrical	Option 1	MFFF Construction - Installation/Materials	78,559	946,936	868,377
1744.4490	Instrumentation	Option 1	MFFF Construction - Installation/Materials	(39,748)	52,684	92,432
1746.4600	Fuel Assembly / Rods	Option 1	MFFF Construction - Installation/Materials	4,898,683	4,513,528	(385,155)
1746.4610	Powder & Pellets	Option 1	MFFF Construction - Installation/Materials	18,241,062	13,852,934	(4,388,128)
1746.4620	Furnaces & Pellet Storage	Option 1	MFFF Construction - Installation/Materials	3,989,918	3,217,081	(772,837)
1746.4630	PuO2 Receiving, Storage & Decanning	Option 1	MFFF Construction - Installation/Materials	3,434,938	1,593,800	(1,841,138)
1746.4640	Labs & Testing	Option 1	MFFF Construction - Installation/Materials	36,210,885	35,673,183	(537,702)
1751.5100	Building Structure	Option 1	MFFF Construction - Installation/Materials	18,030,779	21,310,875	3,280,096
1751.5110	Architectural Features	Option 1	MFFF Construction - Installation/Materials	205,275	7,294,497	7,089,222
1751.5120	HVAC	Option 1	MFFF Construction - Installation/Materials	2,289,145	8,716,658	6,427,513
1751.5130	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 1 –	Option 1	MFFF Construction - Installation/Materials	1,247,530	1,801,582	554,052
1751.5140	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	3,277,473	1,933,426	(1,344,046)
1751.5150	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	20,664,387	63,273,713	42,609,326
1751.5170	Other Equipment	Option 1	MFFF Construction - Installation/Materials	998,403	2,006,893	1,008,490
1751.5180	Electrical	Option 1	MFFF Construction - Installation/Materials	2,199,273	17,201,810	15,002,537
1751.5190	Instrumentation	Option 1	MFFF Construction - Installation/Materials	2,886,311	776,284	(2,110,026)
1751.5250		Option 1	MFFF Construction - Installation/Materials	-	-	-
1751.5700		Option 1	MFFF Construction - Installation/Materials	-	-	-
1752.5200	Building Structure	Option 1	MFFF Construction - Installation/Materials	5,326,583	9,451,743	4,125,160
1752.5210	Architectural Features	Option 1	MFFF Construction - Installation/Materials	(11,660)	1,248,731	1,260,391
1752.5220	HVAC	Option 1	MFFF Construction - Installation/Materials	3,076,650	5,815,594	2,738,943
1752.5230	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 2 –	Option 1	MFFF Construction - Installation/Materials	772,172	1,481,053	708,881
1752.5240	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	799,083	668,407	(130,676)
1752.5250	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	22,325,326	103,387,615	81,062,289
1752.5270	Other Equipment	Option 1	MFFF Construction - Installation/Materials	1,739,491	451,468	(1,288,023)
1752.5280	Electrical	Option 1	MFFF Construction - Installation/Materials	4,274,729	14,240,247	9,965,518
1752.5290	Instrumentation	Option 1	MFFF Construction - Installation/Materials	3,457,434	979,949	(2,477,485)
1753.5300	Building Structure	Option 1	MFFF Construction - Installation/Materials	7,043,044	18,004,541	10,961,497
1753.5310	Architectural Features	Option 1	MFFF Construction - Installation/Materials	(7,882)	1,752,632	1,760,514
1753.5320	HVAC	Option 1	MFFF Construction - Installation/Materials	2,842,768	5,006,959	2,164,191
1753.5330	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 3 –	Option 1	MFFF Construction - Installation/Materials	803,128	1,850,451	1,047,323
1753.5340	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	570,699	240,601	(330,098)
1753.5350	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	12,311,041	15,128,246	2,817,205
1753.5370	Other Equipment	Option 1	MFFF Construction - Installation/Materials	6,140	729,933	723,793
1753.5380	Electrical	Option 1	MFFF Construction - Installation/Materials	8,088,441	16,393,472	8,305,031
1753.5390	Instrumentation	Option 1	MFFF Construction - Installation/Materials	4,125,471	1,390,017	(2,735,454)
1754.5400	Building Structure	Option 1	MFFF Construction - Installation/Materials	-	5,868,741	5,868,741
1754.5410	Architectural Features	Option 1	MFFF Construction - Installation/Materials	27,732	1,700,960	1,673,228
1754.5420	HVAC	Option 1	MFFF Construction - Installation/Materials	2,895,119	4,469,887	1,574,769
1754.5430	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 4 –	Option 1	MFFF Construction - Installation/Materials	987,070	2,143,927	1,156,857

CB&I AREVA MOX Services, LLC.
MFFF Project Cost Growth by Cost Account and Claim Category

Schedule 1.31

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = B - A
				2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1754.5440	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	1,509,067	1,364,002	(145,065)
1754.5450	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	10,269,733	15,901,164	5,631,431
1754.5470	Other Equipment	Option 1	MFFF Construction - Installation/Materials	585,252	503,476	(81,776)
1754.5480	Electrical	Option 1	MFFF Construction - Installation/Materials	4,732,941	16,215,664	11,482,723
1754.5490	Instrumentation	Option 1	MFFF Construction - Installation/Materials	7,283,214	814,419	(6,468,795)
1754.5540	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	2,231	-	(2,231)
1755.5500	Building Structure	Option 1	MFFF Construction - Installation/Materials	-	10,560,583	10,560,583
1755.5510	Architectural Features	Option 1	MFFF Construction - Installation/Materials	130,702	2,112,694	1,981,992
1755.5520	HVAC	Option 1	MFFF Construction - Installation/Materials	3,234,191	9,439,141	6,204,950
1755.5530	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 5 –	Option 1	MFFF Construction - Installation/Materials	1,653,686	1,390,009	(263,677)
1755.5540	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	2,235,565	2,042,028	(193,537)
1755.5550	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	12,301,514	9,663,694	(2,637,820)
1755.5570	Other Equipment	Option 1	MFFF Construction - Installation/Materials	353,332	213,102	(140,230)
1755.5580	Electrical	Option 1	MFFF Construction - Installation/Materials	3,703,393	13,361,396	9,658,003
1755.5590	Instrumentation	Option 1	MFFF Construction - Installation/Materials	13,320,716	15,438,044	2,117,327
1756.5600	Building Structure	Option 1	MFFF Construction - Installation/Materials	6,165,298	5,340,300	(824,998)
1756.5670	Other Equipment	Option 1	MFFF Construction - Installation/Materials	3,829,080	-	(3,829,080)
1756.5680	Electrical	Option 1	MFFF Construction - Installation/Materials	-	187,169	187,169
1756.5690	Instrumentation	Option 1	MFFF Construction - Installation/Materials	-	10,436	10,436
1757.5730	PAF	Option 1	MFFF Construction - Installation/Materials	-	35,808	35,808
1758.5810	Mechanical Systems	Option 1	MFFF Construction - Installation/Materials	12,540,902	11,156,856	(1,384,046)
1758.5850	Chemical Systems	Option 1	MFFF Construction - Installation/Materials	2,438,555	7,082,040	4,643,485
1761.6100	Building Structure	Option 1	MFFF Construction - Installation/Materials	18,229,486	21,483,846	3,254,360
1761.6110	Architectural Features	Option 1	MFFF Construction - Installation/Materials	2,028,305	4,960,379	2,932,074
1761.6120	HVAC	Option 1	MFFF Construction - Installation/Materials	1,435,517	4,364,621	2,929,105
1761.6130	Shipping and Receiving Area (BSR) – Shipping and Receiving Area – Le	Option 1	MFFF Construction - Installation/Materials	1,605,863	1,443,333	(162,529)
1761.6140	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	1,406,932	1,486,598	(458,335)
1761.6150	Process Piping	Option 1	MFFF Construction - Installation/Materials	330,741	1,199,682	868,941
1761.6170	Other Equipment	Option 1	MFFF Construction - Installation/Materials	258,851	358,450	99,599
1761.6180	Electrical	Option 1	MFFF Construction - Installation/Materials	9,717,335	9,076,335	(641,000)
1761.6190	Instrumentation	Option 1	MFFF Construction - Installation/Materials	468,092	1,093,509	625,417
1762.6200	Building Structure	Option 1	MFFF Construction - Installation/Materials	6,002,734	11,030,640	5,027,906
1762.6210	Architectural Features	Option 1	MFFF Construction - Installation/Materials	35,534	808,993	773,459
1762.6220	HVAC	Option 1	MFFF Construction - Installation/Materials	2,833,861	7,875,915	5,042,054
1762.6230	Shipping and Receiving Area (BSR) – Shipping and Receiving Area – Le	Option 1	MFFF Construction - Installation/Materials	1,254,324	1,448,395	194,071
1762.6240	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	107,201	20,100	(87,101)
1762.6250	Process Piping	Option 1	MFFF Construction - Installation/Materials	186,238	311,367	125,129
1762.6270	Other Equipment	Option 1	MFFF Construction - Installation/Materials	-	34,875	34,875
1762.6280	Electrical	Option 1	MFFF Construction - Installation/Materials	2,433,971	5,336,801	2,902,830
1762.6290	Instrumentation	Option 1	MFFF Construction - Installation/Materials	120,382	334,483	214,102
1763.6300	Building Structure	Option 1	MFFF Construction - Installation/Materials	-	5,600,636	5,600,636
1763.6310	Architectural Features	Option 1	MFFF Construction - Installation/Materials	477,402	1,669,516	1,192,114
1763.6320	HVAC	Option 1	MFFF Construction - Installation/Materials	2,563,310	7,568,000	5,004,690
1763.6330	Shipping and Receiving Area (BSR) – Shipping and Receiving Area – Le	Option 1	MFFF Construction - Installation/Materials	1,755,869	1,659,212	(96,657)
1763.6340	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	146,215	58,334	(87,881)
1763.6350	Process Piping	Option 1	MFFF Construction - Installation/Materials	45,070	863,815	818,745
1763.6370	Other Equipment	Option 1	MFFF Construction - Installation/Materials	7,331	105,520	98,189
1763.6380	Electrical	Option 1	MFFF Construction - Installation/Materials	1,079,778	8,730,876	7,651,098
1763.6390	Instrumentation	Option 1	MFFF Construction - Installation/Materials	1,591,341	1,779,241	187,901
1764.6400	Building Structure	Option 1	MFFF Construction - Installation/Materials	-	3,072,441	3,072,441

CB&I AREVA MOX Services, LLC.
MFFF Project Cost Growth by Cost Account and Claim Category

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Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = B - A
				2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1764.6470	Other Equipment	Option 1	MFFF Construction - Installation/Materials	6,602	-	(6,602)
1764.6480	Electrical	Option 1	MFFF Construction - Installation/Materials	-	186,341	186,341
1764.6490	Instrumentation	Option 1	MFFF Construction - Installation/Materials	-	10,457	10,457
1771.7100	Building Structure	Option 1	MFFF Construction - Installation/Materials	7,436,315	8,425,791	989,476
1771.7110	Architectural Features	Option 1	MFFF Construction - Installation/Materials	7,146,295	1,420,056	(5,726,239)
1771.7120	HVAC	Option 1	MFFF Construction - Installation/Materials	927,006	4,359,752	3,432,746
1771.7130	Fire Protection	Option 1	MFFF Construction - Installation/Materials	2,988	-	(2,988)
1771.7140	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	8,055	35,057	27,002
1771.7170	Other Equipment	Option 1	MFFF Construction - Installation/Materials	328	-	(328)
1771.7180	Electrical	Option 1	MFFF Construction - Installation/Materials	3,131,063	1,682,127	(1,448,936)
1771.7190	Instrumentation	Option 1	MFFF Construction - Installation/Materials	231,865	86,625	(145,240)
1772.7200	Building Structure	Option 1	MFFF Construction - Installation/Materials	25,824,745	39,222,116	13,397,371
1772.7210	Architectural Features	Option 1	MFFF Construction - Installation/Materials	1,068,385	31,026,898	29,958,513
1772.7270	Other Equipment	Option 1	MFFF Construction - Installation/Materials	274,440	113,238	(161,202)
1772.7280	Electrical	Option 1	MFFF Construction - Installation/Materials	1,039,438	1,091,331	51,893
1774.7401	Subcontractor Project Management/Project Controls	Option 1	MFFF Construction - Installation/Materials	6,598,306	72,846,805	66,248,499
1774.7402	Subcontractor Project Administration/Accounting	Option 1	MFFF Construction - Installation/Materials	-	-	-
1774.7403	Subcontractor Quality Assurance / Quality Control	Option 1	MFFF Construction - Installation/Materials	-	-	-
1774.7404	Subcontractor Environmental, Safety and Health	Option 1	MFFF Construction - Installation/Materials	-	3	3
1774.7405	Subcontractor Home Office Support	Option 1	MFFF Construction - Installation/Materials	-	-	-
1774.7406	Subcontractor Mobilization	Option 1	MFFF Construction - Installation/Materials	437,300	859,829	422,528
1774.7407	Subcontractor Demobilization	Option 1	MFFF Construction - Installation/Materials	26,800	580,131	553,331
1774.7408	Dewatering, Erosion and Sedimentation Control	Option 1	MFFF Construction - Installation/Materials	176,470	176,470	(0)
1774.7409	Equipment Rental (Including Vehicles)	Option 1	MFFF Construction - Installation/Materials	2,356,013	20,944,738	18,588,725
1774.7410	Miscellaneous Procured Services	Option 1	MFFF Construction - Installation/Materials	225,600	1,447,138	1,221,538
1774.7411	Consumables and Expendable Materials	Option 1	MFFF Construction - Installation/Materials	775,267	4,263,877	3,488,610
1774.7412	Performance Bond	Option 1	MFFF Construction - Installation/Materials	871,448	1,107,034	235,586
1774.7413	Tools	Option 1	MFFF Construction - Installation/Materials	196,633	387,367	190,734
1774.7414	Craft Distributable and Indirect Costs	Option 1	MFFF Construction - Installation/Materials	3,766,887	14,124,171	10,357,284
1774.7415	Concrete Batch Plant	Option 1	MFFF Construction - Installation/Materials	3,778,207	3,778,185	(22)
1774.7416	Independent Test Lab	Option 1	MFFF Construction - Installation/Materials	1,018,992	1,887,424	868,432
1774.7417	NDE Testing	Option 1	MFFF Construction - Installation/Materials	874,858	904,226	29,368
1774.7418	Craft Support for MFFF Construction	Option 1	MFFF Construction - Installation/Materials	1,445,077	23,870,675	22,425,598
1774.7419	Construction Distributables - Misc	Option 1	MFFF Construction - Installation/Materials	8,997,911	44,517,380	35,519,469
1774.7420	Bulk Cable for MFFF Construction	Option 1	MFFF Construction - Installation/Materials	10,123,467	36,510,224	26,386,757
1774.7421	Electrical Connectors for MFFF Construction	Option 1	MFFF Construction - Installation/Materials	-	-	-
1774.7422	Electric Glove Box Penetrations for MFFF Construction	Option 1	MFFF Construction - Installation/Materials	-	-	-
1774.7424	Distributables - Bulk Commodity - HVAC	Option 1	MFFF Construction - Installation/Materials	16,844,578	17,545,355	700,777
1774.7427	Rebar MFFF Construction	Option 1	MFFF Construction - Installation/Materials	-	59,420	59,420
1774.7428	Civil/Structural Material	Option 1	MFFF Construction - Installation/Materials	12,784,971	44,341,502	31,556,531
1774.7429	Distributables - Bulk Commodity - Stainless Steel Ball Valves	Option 1	MFFF Construction - Installation/Materials	17,659,657	17,088,381	(571,276)
1774.7430	Distributable - Bulk Commodity Account - Chillers	Option 1	MFFF Construction - Installation/Materials	2,428,798	2,321,091	(107,707)
1774.7431	Bulk Commodity - Fans	Option 1	MFFF Construction - Installation/Materials	-	-	-
1774.7432	Electrical Material and Other Miscellaneous Labor Acct	Option 1	MFFF Construction - Installation/Materials	15,115,366	81,807,066	66,691,700
1774.7433	Instrumentation & Controls Material	Option 1	MFFF Construction - Installation/Materials	97,473,686	73,807,772	(23,665,914)
1774.7434	Chemical Equipment	Option 1	MFFF Construction - Installation/Materials	-	9,905,742	9,905,742
1774.7435	Distributables - HVAC Equipment	Option 1	MFFF Construction - Installation/Materials	7,046,692	92,131,147	85,084,455
1774.7436	Suspense Account - Process Equipment	Option 1	MFFF Construction - Installation/Materials	-	36,697	36,697
1774.7438	Mechanical Equipment	Option 1	MFFF Construction - Installation/Materials	54,802,155	143,942,463	89,140,308
1774.7439	Consumable & Expendable Materials Specific to CP-27 - BAP Chemical P	Option 1	MFFF Construction - Installation/Materials	1,584,469	37,778,832	36,194,363

CB&I AREVA MOX Services, LLC.
MFFF Project Cost Growth by Cost Account and Claim Category

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Cost Account	Cost Account Description	Contract	Claim Category	[A]		[B]		[C] = B - A
				2007 Baseline		2012 Rebaseline with Addendum		Cost Growth
1774.7440	Support Building for the Fabrication of Supports on Site Specific to	Option 1	MFFF Construction - Installation/Materials	-		39,366,963		39,366,963
1774.7441	BRP Distributables	Option 1	MFFF Construction - Installation/Materials	-		481,143		481,143
1774.7442	Craft Labor for Non-Discipline Specific Scope	Option 1	MFFF Construction - Installation/Materials	-		7,070,939		7,070,939
1774.7445	Craft Orientation & Training	Option 1	MFFF Construction - Installation/Materials	-		3,113,237		3,113,237
1774.7446	MOX Construction Back Charges	Option 1	MFFF Construction - Installation/Materials	-		-		-
1774.7453	Craft Orientation & Training	Option 1	MFFF Construction - Installation/Materials	-		125,868		125,868
1774.7454	Bulk Procurement - Material	Option 1	MFFF Construction - Installation/Materials	-		253,976		253,976
1774.7455	Distributable - Subcontract	Option 1	MFFF Construction - Installation/Materials	-		750,385		750,385
1775.7501	Batch Plant Capital Cost	Option 1	MFFF Construction - Installation/Materials	-		-		-
1775.7502	Batch Plant Operations	Option 1	MFFF Construction - Installation/Materials	-		0		0
1775.7503	Batch Plant Concrete Materials	Option 1	MFFF Construction - Installation/Materials	-		(0)		(0)
MFFF Construction - Installation/Materials Subtotal				\$ 1,062,600,195		\$ 2,204,150,497		\$ 1,141,550,303
1500.8501	Management / Admin	Option 1	Construction Management	\$ 23,522,195		\$ 63,202,558		\$ 39,680,363
1500.8502	Project Controls	Option 1	Construction Management	10,943,800		32,745,008		21,801,208
1500.8503	Quality Assurance	Option 1	Construction Management	749,625		484,283		(265,342)
1500.8504	ES&H	Option 1	Construction Management	2,719,758		694,576		(2,025,182)
1500.8506	Business	Option 1	Construction Management	1,451,888		4,061,850		2,609,963
1501.8511	Business Travel	Option 1	Construction Management	711,965		494,312		(217,653)
1501.8512	Temporary Assignments	Option 1	Construction Management	20,153		1,802,546		1,782,393
1501.8519	Project Controls	Option 1	Construction Management	-		-		-
1502.8521	Supervision / Admin	Option 1	Construction Management	-		-		-
1502.8522	Project Controls	Option 1	Construction Management	-		-		-
1502.8523	Quality Assurance	Option 1	Construction Management	-		-		-
1502.8524	ES&H	Option 1	Construction Management	-		-		-
1503.8531	Supervision / Admin	Option 1	Construction Management	-		-		-
1503.8532	Project Controls	Option 1	Construction Management	-		-		-
1503.8534	ES&H	Option 1	Construction Management	-		-		-
1504.8512	Temporary Assignments	Option 1	Construction Management	-		1,858		1,858
1504.8541	Supervision / Admin	Option 1	Construction Management	21,437,033		107,636,857		86,199,824
1504.8542	Work Control Group	Option 1	Construction Management	-		-		-
1505.8551	Supervision / Admin	Option 1	Construction Management	(41,922)		3,461,412		3,503,334
1505.8552	Project Controls	Option 1	Construction Management	-		-		-
1505.8554	ES&H	Option 1	Construction Management	-		-		-
Construction Management Subtotal				\$ 61,514,495		\$ 214,585,261		\$ 153,070,766
1901.6017	Human Performance Improvement Program	Option 1	QA	\$ -		\$ 162,906		\$ 162,906
1901.6018	QA/QC - JLE/LTTA	Option 1	QA	-		-		-
1901.6020	QA Program Management & Administration	Option 1	QA	3,211,818		12,989,851		9,778,033
1901.6021	Quality Engineering	Option 1	QA	4,758,444		24,010,181		19,251,737
1901.6022	Audit & Surveillance	Option 1	QA	1,318,214		13,036,397		11,718,183
1901.6023	Quality Control Projects	Option 1	QA	4,652,064		78,946,499		74,294,435
1901.6024	QA & QC Assembly GS	Option 1	QA	1,716,727		4,392,446		2,675,719
1901.6025	MOX Potential Back Charges	Option 1	QA	-		399		399
1901.6026	QA/QC Subcontractors	Option 1	QA	300,000		256,791		(43,209)
1901.6027	Testing & Inspection QA/QC	Option 1	QA	3,776,738		22,121,449		18,344,711
1901.6028	Commercial Grade Dedication	Option 1	QA	-		54,273		54,273
1901.6029	Regulatory Compliance	Option 1	QA	720,511		5,147,845		4,427,334
1901.9003	Quality Engineering	Option 1	QA	1,353,049		-		(1,353,049)
1901.9503	Quality Engineering	Option 1	QA	-		-		-

CB&I AREVA MOX Services, LLC.
MFFF Project Cost Growth by Cost Account and Claim Category

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Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = B - A
				2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1902.6017	Human Performance Improvement Program	Option 1	QA	-	10,204	10,204
1902.6020	QA Program Management & Administration	Option 1	QA	-	1,809,790	1,809,790
1902.6021	Quality Engineering	Option 1	QA	-	1,277,372	1,277,372
1902.6022	Audit & Surveillance	Option 1	QA	-	1,270,862	1,270,862
1902.6023	Quality Control Projects	Option 1	QA	-	2,036,800	2,036,800
1902.6026	QA/QC Subcontractors	Option 1	QA	-	22,215	22,215
1902.6027	Testing & Inspection QA/QC	Option 1	QA	-	349,467	349,467
1902.6029	Regulatory Compliance	Option 1	QA	-	983,821	983,821
1902.9503	Quality Engineering	Option 1	QA	1,215,489	-	(1,215,489)
Quality Assurance Subtotal				\$ 23,023,054	\$ 168,879,568	\$ 145,856,514
0601.6001	Communications	Option 1	Not Claimed- All Other	\$ -	\$ -	\$ -
0601.6009	Relocations	Option 1	Not Claimed- All Other	-	-	-
0602.6010	Project Controls	Option 1	Not Claimed- All Other	-	-	-
0604.6032	Training	Option 1	Not Claimed- All Other	-	-	-
0604.6036	Accounting, Treasury & Invoice Operations	Option 1	Not Claimed- All Other	-	-	-
0604.6038	Facility Management	Option 1	Not Claimed- All Other	-	-	-
0604.6042	PERC\$	Option 1	Not Claimed- All Other	-	-	-
0604.6047	Legal Expenses	Option 1	Not Claimed- All Other	-	-	-
0606.6057	Engineered Equipment Group	Option 1	Not Claimed- All Other	-	-	-
0607.6060	IT Support	Option 1	Not Claimed- All Other	-	-	-
0607.6061	IT Other Direct Costs (ODCs)	Option 1	Not Claimed- All Other	-	-	-
0611.6001	Communications	Option 1	Not Claimed- All Other	-	-	-
0611.6090	Project Systems Assessment - NNSA (OPC)	Option 1	Not Claimed- All Other	-	-	-
0614.6033	Materials Management	Option 1	Not Claimed- All Other	-	-	-
1000.8005	Document Management	Option 1	Not Claimed- All Other	-	450,677	450,677
1000.8006	Engineering Training	Option 1	Not Claimed- All Other	(1,662,648)	1,124,889	2,787,537
1001.8011	Business Travel	Option 1	Not Claimed- All Other	984,928	334,582	(650,346)
1001.8012	Temporary Assignments	Option 1	Not Claimed- All Other	-	-	-
1001.8019	Other ODCs	Option 1	Not Claimed- All Other	2,294,689	792,740	(1,501,949)
1002.8022	Chemical	Option 1	Not Claimed- All Other	697,527	620,664	(76,863)
1002.8023	Mechanical	Option 1	Not Claimed- All Other	899,488	93,201	(806,287)
1002.8024	Laboratory	Option 1	Not Claimed- All Other	217,824	63,836	(153,988)
1002.8026	Safety	Option 1	Not Claimed- All Other	299,570	79,743	(219,827)
1002.8027	Reference Plant Support	Option 1	Not Claimed- All Other	229,339	28,220	(201,119)
1003.8031	Supervision / Admin	Option 1	Not Claimed- All Other	(852,472)	1,000,816	1,853,288
1003.8038	Engineering Mechanics - Site Construction Support	Option 1	Not Claimed- All Other	-	-	-
1004.8046	Chemical-Procurement/Fabrication Support	Option 1	Not Claimed- All Other	-	-	-
1004.8048	Plant Configuration - Construction, Procurement & Fabrication Support	Option 1	Not Claimed- All Other	2,338,083	-	(2,338,083)
1004.8049	Equipment Qualification	Option 1	Not Claimed- All Other	(127,547)	426,083	553,630
1005.8051	Supervision / Admin	Option 1	Not Claimed- All Other	435,306	141,465	(293,840)
1005.8059	Plant Configuration	Option 1	Not Claimed- All Other	-	-	-
1100.8101	Management / Administration	Option 1	Not Claimed- All Other	56,895	210,215	153,320
1100.8102	NSA Project Controls	Option 1	Not Claimed- All Other	80,184	94,764	14,580
1101.8111	Business Travel	Option 1	Not Claimed- All Other	361,404	87,121	(274,283)
1101.8119	Other ODCs (Legal & S/C Costs)	Option 1	Not Claimed- All Other	2,060,536	896,882	(1,163,654)
1102.8122	Compliance Program	Option 1	Not Claimed- All Other	459,181	912,882	453,701
1103.8132	Chemical Safety Support	Option 1	Not Claimed- All Other	3,216,532	2,050,513	(1,166,019)
1103.8133	Laboratory Support	Option 1	Not Claimed- All Other	1,712,258	1,228,793	(483,465)
1104.8151	Criticality Safety Procurement & Cons	Option 1	Not Claimed- All Other	-	-	-

CB&I AREVA MOX Services, LLC.
MFFF Project Cost Growth by Cost Account and Claim Category

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Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = B - A
				2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1105.8151	Criticality Safety Procurement & Const Support	Option 1	Not Claimed- All Other	2,250,017	3,169,473	919,456
1105.8152	Criticality Safety Startup Support	Option 1	Not Claimed- All Other	2,570,594	1,434,865	(1,135,729)
1105.8153	Criticality Safety Licensing Support	Option 1	Not Claimed- All Other	2,971,399	2,046,062	(925,337)
1105.8154	Nuclear Radiation Protections	Option 1	Not Claimed- All Other	3,071,845	2,737,319	(334,526)
1105.8155	Nuclear Radiation & Criticality Monitoring	Option 1	Not Claimed- All Other	886,654	594,766	(291,888)
1105.8156	Emerg. Planning & Deactivation Design Spt.	Option 1	Not Claimed- All Other	233,008	143,133	(89,875)
1106.8116	Integrated Safety Analysis	Option 1	Not Claimed- All Other	-	-	-
1106.8161	Defense of the Safety Basis	Option 1	Not Claimed- All Other	3,312,438	2,663,143	(649,295)
1106.8162	ISA Review of Design/Construction Modification	Option 1	Not Claimed- All Other	2,793,633	2,831,117	37,484
1106.8164	Update the Safety Basis	Option 1	Not Claimed- All Other	4,732,258	3,584,413	(1,147,845)
1106.8165	Support Update of the ISA Summary	Option 1	Not Claimed- All Other	1,779,036	1,211,164	(567,872)
1109.8192	Physical Security Program	Option 1	Not Claimed- All Other	3,793,703	2,940,859	(852,844)
1109.8193	Material Control & Accountability Program	Option 1	Not Claimed- All Other	2,710,939	1,597,569	(1,113,370)
1109.8195	DOE/WSRC Costs	Option 1	Not Claimed- All Other	-	-	-
1757.5700	AP Chemical Units	Option 1	Not Claimed- All Other	-	-	-
1757.5720	AP Mechanical Units	Option 1	Not Claimed- All Other	-	-	-
2000.9001	Management / Administration	Option 1	Not Claimed- All Other	3,100,265	-	(3,100,265)
2000.9002	Project Controls	Option 1	Not Claimed- All Other	1,456,987	-	(1,456,987)
2000.9003	Quality Assurance	Option 1	Not Claimed- All Other	-	-	-
2000.9004	Environment, Safety & Health	Option 1	Not Claimed- All Other	-	-	-
2001.9011	Business Travel	Option 1	Not Claimed- All Other	2,753,497	1,049,346	(1,704,151)
2001.9012	Temporary Assignments	Option 1	Not Claimed- All Other	2,111,832	71,116	(2,040,716)
2001.9014	Test Equipment & Consumables	Option 1	Not Claimed- All Other	13,149,552	1,927,294	(11,222,258)
2001.9017	Spare Parts	Option 1	Not Claimed- All Other	3,961,181	385,458	(3,575,723)
2002.9021	Generic Test Documents	Option 1	Not Claimed- All Other	1,772,689	1,500,169	(272,520)
2002.9022	Validation Plans	Option 1	Not Claimed- All Other	8,423,068	1,059,587	(7,363,481)
2002.9023	General Test Programs	Option 1	Not Claimed- All Other	1,764,832	2,380,380	615,548
2002.9024	Technical Support	Option 1	Not Claimed- All Other	3,217,683	2,488,803	(728,880)
2002.9026	Cold Startup Training	Option 1	Not Claimed- All Other	1,218,246	155,818	(1,062,428)
2002.9527	Generic Test Documents	Option 1	Not Claimed- All Other	-	-	-
2003.9011	Generic Test Documents	Option 1	Not Claimed- All Other	-	-	-
2003.9031	In-Advance Tests in U.S.	Option 1	Not Claimed- All Other	8,731,119	8,577,404	(153,715)
2003.9032	In-Advance Tests in Europe	Option 1	Not Claimed- All Other	3,929,344	2,238,999	(1,690,345)
2004.9041	Aqueous Polishing	Option 1	Not Claimed- All Other	26,892,156	17,121,299	(9,770,858)
2004.9042	MOX Process	Option 1	Not Claimed- All Other	23,517,959	21,675,945	(1,842,014)
2004.9043	Balance of Plant	Option 1	Not Claimed- All Other	19,879,489	15,238,873	(4,640,616)
2004.9044	Reaction to General Incident (RGI)	Option 1	Not Claimed- All Other	3,827,814	2,529,087	(1,298,727)
2004.9047	Turnover & Logistics	Option 1	Not Claimed- All Other	13,498,496	-	(13,498,496)
2004.9048	Laboratory - IPT	Option 1	Not Claimed- All Other	-	8,094,707	8,094,707
2004.9049	Process Control - IPT	Option 1	Not Claimed- All Other	-	7,939,498	7,939,498
2005.9051	SU In-Advance Tests Rework and Modifications in US	Option 1	Not Claimed- All Other	-	176,629	176,629
2007.9071	MOX IPT Rework	Option 1	Not Claimed- All Other	-	34,495,693	34,495,693
2010.9101	Management / Administration - IPT	Option 1	Not Claimed- All Other	-	-	-
2010.9102	Project Controls - IPT	Option 1	Not Claimed- All Other	-	-	-
2011.9111	Business Travel - IPT	Option 1	Not Claimed- All Other	-	310,955	310,955
2011.9112	Generic Test Documents	Option 1	Not Claimed- All Other	-	-	-
2011.9114	Test Equipment & Consumables - IPT	Option 1	Not Claimed- All Other	-	11,050,555	11,050,555
2011.9117	Spare Parts - IPT	Option 1	Not Claimed- All Other	-	-	-
2012.9124	Technical Support - IPT	Option 1	Not Claimed- All Other	-	168,776	168,776
2012.9126	Cold Startup Training - IPT	Option 1	Not Claimed- All Other	-	-	-

CB&I AREVA MOX Services, LLC.
MFFF Project Cost Growth by Cost Account and Claim Category

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Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = B - A
				2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
2201.8138	Relocation	Option 1	Not Claimed- All Other	-	-	-
2201.8139	Field Office Supplies	Option 1	Not Claimed- All Other	-	-	-
2201.8141	ES&H Program	Option 1	Not Claimed- All Other	-	-	-
2201.8143	Environmental Protection Program	Option 1	Not Claimed- All Other	-	-	-
2201.8144	Industrial Safety Program	Option 1	Not Claimed- All Other	27,680	-	(27,680)
2201.8145	Waste Management Program	Option 1	Not Claimed- All Other	8,156	-	(8,156)
2201.8146	Fitness for Duty Program	Option 1	Not Claimed- All Other	(41,750)	-	41,750
2201.8147	Emergency Preparedness Program	Option 1	Not Claimed- All Other	(1,322,813)	-	1,322,813
2201.8148	Employee Safety Incentive Program	Option 1	Not Claimed- All Other	-	-	-
2201.8149	ES & H Safety Engineer	Option 1	Not Claimed- All Other	-	-	-
2201.8820	Field Office Supplies	Option 1	Not Claimed- All Other	-	-	-
2201.9004	Field Office Supplies	Option 1	Not Claimed- All Other	-	-	-
2201.9504	Field Office Supplies	Option 1	Not Claimed- All Other	-	-	-
2201.9506	Field Office Supplies	Option 1	Not Claimed- All Other	-	-	-
2202.8139	Field Office Supplies	Option 1	Not Claimed- All Other	135,535	-	(135,535)
2202.8145	Waste Management Program	Option 1	Not Claimed- All Other	-	-	-
2202.9004	Field Office Supplies	Option 1	Not Claimed- All Other	2,434,223	-	(2,434,223)
2202.9506	Field Office Supplies	Option 1	Not Claimed- All Other	481,757	-	(481,757)
9008.0901	DOE Annual Costs for the SRS M&O Support to MOX fo all Infrastructur	Option 1	Not Claimed- All Other	28,449,268	65,437,317	36,988,049
9009.0901	DOE/WSRC Support	Option 1	Not Claimed- All Other	(0)	-	0
9009.0902	DOE Annual Costs for the SRS M&O Support to MOX for Infrastructure S	Option 1	Not Claimed- All Other	97,675,478	56,179,840	(41,495,638)
9009.0903	DOE Tech Spt. (Non-MOX Services Cost)	Option 1	Not Claimed- All Other	138,317,424	115,587,284	(22,730,140)
All Other Subtotal				\$ 454,177,767	\$ 413,432,801	\$ (40,744,966)
Option 1 Subtotal				\$ 2,778,822,480	\$ 5,563,751,381	\$ 2,784,928,901
0110.5101	NRC Costs - MFFF	Base	Not Claimed- Base Contract	\$ 12,492,680	\$ 12,646,529	\$ 153,849
0110.5301	Environmental Report	Base	Not Claimed- Base Contract	1,808,835	1,822,489	13,655
0110.5302	Electrolyzer Testing	Base	Not Claimed- Base Contract	268,674	268,684	10
0110.5303	ORNL Gallium Testing	Base	Not Claimed- Base Contract	100,000	100,000	-
0110.5304	ORNL Criticality Review	Base	Not Claimed- Base Contract	150,000	150,000	-
0110.5305	Clemson University Research	Base	Not Claimed- Base Contract	1,300,232	1,421,977	121,745
0110.5306	Development & Test Programs	Base	Not Claimed- Base Contract	2,061,991	2,111,621	49,630
0110.5307	Site Develop./Infrast. Improvement OPC Work	Base	Not Claimed- Base Contract	496,072	496,340	268
0110.5308	SCE Scanner Testing	Base	Not Claimed- Base Contract	506,071	511,780	5,709
0110.5401	MFFF Operations Planning	Base	Not Claimed- Base Contract	3,546	(84,994)	(88,540)
0110.5402	Safety & Systems Integration	Base	Not Claimed- Base Contract	213,271	210,415	(2,856)
0110.5411	Licensing	Base	Not Claimed- Base Contract	5,058,850	5,107,144	48,293
0110.5421	Engineering Support to Licensing - PDG	Base	Not Claimed- Base Contract	88,152	98,149	9,996
0110.5422	Engineering Support to Licensing - FDG	Base	Not Claimed- Base Contract	103,586	121,379	17,793
0110.5423	Engine+B1001ering Support to Licensing - C/S	Base	Not Claimed- Base Contract	112,400	116,292	3,892
0110.5424	Eng. Support to Lic. - Mech.Prog.	Base	Not Claimed- Base Contract	193,906	283,621	89,716
0110.5425	Eng. Support to Lic.- Elect/ I&C/S&S/MC&A	Base	Not Claimed- Base Contract	25,950	25,078	(872)
0110.5427	Engr Support to Lic - Nuclear Safety	Base	Not Claimed- Base Contract	4,805,180	4,823,621	18,440
0110.5428	MFFF Environmental / Permitting	Base	Not Claimed- Base Contract	324,405	320,086	(4,319)
0110.5431	Facility Security Vulnerability Assessment	Base	Not Claimed- Base Contract	181,482	181,482	-
0110.5432	Facility Licensing Plans	Base	Not Claimed- Base Contract	2,301,401	2,305,639	4,238
0110.5450	Miscellaneous Studies	Base	Not Claimed- Base Contract	808,170	970,612	162,443
0110.5451	Coord. & Oversight of CETL Research Projects	Base	Not Claimed- Base Contract	210,465	285,972	75,507
0110.5452	CAB Change Phase II Scoping & Devel	Base	Not Claimed- Base Contract	178,090	180,858	2,768

CB&I AREVA MOX Services, LLC.
MFFF Project Cost Growth by Cost Account and Claim Category

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Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = B - A
				2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
0110.5453	Monitoring & Inspection Impacts Study	Base	Not Claimed- Base Contract	30,700	30,935	235
0110.5454	CAB Phase II	Base	Not Claimed- Base Contract	3,950	3,875	(75)
0110.5455	Maximize the use of MFFF Study	Base	Not Claimed- Base Contract	-	104,822	104,822
0110.5499	Control Area Boundary Change Scoping	Base	Not Claimed- Base Contract	732,197	731,640	(557)
0110.5601	DNFSB	Base	Not Claimed- Base Contract	-	60	60
0111.1101	General	Base	Not Claimed- Base Contract	5,026,335	4,800,117	(226,218)
0111.1102	Mobilization, De-Mob, & Close-out	Base	Not Claimed- Base Contract	888,051	899,521	11,470
0111.1103	Management	Base	Not Claimed- Base Contract	5,971,015	5,945,756	(25,259)
0111.1104	Administrative	Base	Not Claimed- Base Contract	2,660,030	2,667,640	7,610
0111.1105	Support Services	Base	Not Claimed- Base Contract	5,357,579	5,107,135	(250,444)
0111.1106	Miscellaneous	Base	Not Claimed- Base Contract	756,216	737,690	(18,527)
0111.1107	General Expenses	Base	Not Claimed- Base Contract	14,729,895	14,553,159	(176,736)
0111.1108	Procedure Development	Base	Not Claimed- Base Contract	29	29	-
0112.8301	MDG Base Contract (Pre FY 2003)	Base	Not Claimed- Base Contract	4,741,885	5,049,539	307,654
0113.1301	General	Base	Not Claimed- Base Contract	16,203,184	16,151,645	(51,539)
0113.1302	Receiving	Base	Not Claimed- Base Contract	812,940	814,098	1,158
0113.1303	Powder	Base	Not Claimed- Base Contract	2,908,689	2,927,651	18,962
0113.1304	Pellets	Base	Not Claimed- Base Contract	2,065,684	2,066,298	614
0113.1305	Cladding	Base	Not Claimed- Base Contract	1,414,974	1,415,796	822
0113.1306	Assembling	Base	Not Claimed- Base Contract	968,526	967,433	(1,093)
0113.1307	Laboratory	Base	Not Claimed- Base Contract	557,218	557,757	538
0113.1308	Samples Pneumatic Transfer	Base	Not Claimed- Base Contract	191,095	191,097	3
0113.1309	Waste Management	Base	Not Claimed- Base Contract	436,191	436,733	541
0113.1310	Material Control & Accountability	Base	Not Claimed- Base Contract	325,233	325,534	301
0113.1311	Process Control	Base	Not Claimed- Base Contract	422,428	422,672	244
0113.1312	Integrated Safety Analysis	Base	Not Claimed- Base Contract	5,059,365	5,080,631	21,266
0113.1313	Facility Input	Base	Not Claimed- Base Contract	819,271	819,425	153
0113.1399	PDG MOX Process Unplanned Work	Base	Not Claimed- Base Contract	386,378	363,641	(22,736)
0114.1401	General	Base	Not Claimed- Base Contract	4,992,486	4,943,475	(49,011)
0114.1402	Dissolution	Base	Not Claimed- Base Contract	4,389,754	4,396,665	6,910
0114.1403	Purification	Base	Not Claimed- Base Contract	3,985,738	3,989,262	3,524
0114.1404	Conversion	Base	Not Claimed- Base Contract	1,661,571	1,662,388	817
0114.1405	Facility Input	Base	Not Claimed- Base Contract	3,071,732	3,073,636	1,904
0114.1406	Safety	Base	Not Claimed- Base Contract	7,625,187	7,785,239	160,052
0115.1501	General	Base	Not Claimed- Base Contract	13,537,594	13,628,548	90,954
0115.1502	Buildings, Structures & Yard	Base	Not Claimed- Base Contract	37,545,386	37,399,208	(146,178)
0115.1503	Deliverables	Base	Not Claimed- Base Contract	20,290	20,283	(7)
0115.1504	Mechanical Programs	Base	Not Claimed- Base Contract	31,095,227	67,260,221	36,165,035
0115.1505	Electrical Programs	Base	Not Claimed- Base Contract	780,168	917,015	136,846
0115.1506	Nuclear Safety Programs	Base	Not Claimed- Base Contract	14,145,270	14,413,675	268,405
0115.1507	Mechanical Systems & Components	Base	Not Claimed- Base Contract	27,601,213	28,782,999	1,181,786
0115.1508	Electrical Systems & Components	Base	Not Claimed- Base Contract	33,524,806	40,963,289	7,438,483
0115.1509	Nuclear Safety Systems & Components	Base	Not Claimed- Base Contract	2,715,956	2,710,756	(5,200)
0115.1510	Process Mechanical	Base	Not Claimed- Base Contract	15,042,764	15,181,618	138,854
0115.1511	Mechanical Gloveboxes	Base	Not Claimed- Base Contract	5,819,916	5,593,595	(226,321)
0115.1512	Site Development / Infrastructure Improvement	Base	Not Claimed- Base Contract	2,101,908	1,966,135	(135,773)
0115.1513	Plant Design System	Base	Not Claimed- Base Contract	37,535,687	52,553,299	15,017,613
0115.8154	Nuclear Radiation Protections	Base	Not Claimed- Base Contract	-	-	-
0116.1601	DNFSB & Commonality Questions & Issues	Base	Not Claimed- Base Contract	0	535	535
0116.8401	SDG Base Contract Pre-FY 2003	Base	Not Claimed- Base Contract	2,516,494	2,463,869	(52,625)

CB&I AREVA MOX Services, LLC.
MFFF Project Cost Growth by Cost Account and Claim Category

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Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = B - A
				2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
0117.1701	Licensing	Base	Not Claimed- Base Contract	14,857,708	14,916,060	58,352
0117.1702	Environmental Report	Base	Not Claimed- Base Contract	6,678	6,128	(550)
0117.1703	Environment	Base	Not Claimed- Base Contract	453,526	457,912	4,386
0117.1704	Safety & Health	Base	Not Claimed- Base Contract	698,078	713,480	15,402
0117.1705	Emergency Planning	Base	Not Claimed- Base Contract	152,275	149,349	(2,927)
0117.1706	ISA Support (Contractor's ODCs)	Base	Not Claimed- Base Contract	19,944,162	19,852,077	(92,085)
0117.1707	Technology Assessment (TA) Support	Base	Not Claimed- Base Contract	1,502,765	1,571,146	68,380
0117.1710	UCNI Training	Base	Not Claimed- Base Contract	92,890	93,039	148
0118.1801	Office rent, suppl/serv, equi.& furnit L&P	Base	Not Claimed- Base Contract	2,997,271	2,994,997	(2,274)
0118.1802	Furniture	Base	Not Claimed- Base Contract	2,378,914	2,378,913	(1)
0118.1803	Cabling & Telephone	Base	Not Claimed- Base Contract	94,023	94,023	(0)
0118.1804	Upfit	Base	Not Claimed- Base Contract	387,935	387,936	1
0118.1805	Relocation Services	Base	Not Claimed- Base Contract	10,495	10,495	-
0118.1806	Remote Location Office Space	Base	Not Claimed- Base Contract	412,913	415,133	2,220
0119.1901	Computer Equipment & Software L&P	Base	Not Claimed- Base Contract	5,643,574	5,719,902	76,329
0119.1902	Software	Base	Not Claimed- Base Contract	1,136,702	1,136,702	0
0119.1903	Service Contracts	Base	Not Claimed- Base Contract	283,607	283,607	0
0119.1904	Initial Setup	Base	Not Claimed- Base Contract	12,910	13,101	191
0120.8110	Project Management Pre-Construction Planning	Base	Not Claimed- Base Contract	4,945,005	4,974,617	29,611
0120.8120	Project Controls Pre-Construction	Base	Not Claimed- Base Contract	2,498,517	2,525,925	27,408
0120.8130	Project QA Pre-Construction	Base	Not Claimed- Base Contract	-	-	-
0120.8140	Project ES&H Pre-Construction	Base	Not Claimed- Base Contract	765,345	758,325	(7,020)
0120.8160	Project Services & Admin Pre-Construction	Base	Not Claimed- Base Contract	62,741	64,361	1,620
0120.8170	Procure./Subcontract Admin Pre-Construction	Base	Not Claimed- Base Contract	270,533	284,712	14,179
0120.8200	PreOptIBConstrPrjTitleIII EngineeringMgmt-LL EnginProcurement	Base	Not Claimed- Base Contract	3,175	3,153	(22)
0120.8210	Engineering Civil / Structural Pre-Construction	Base	Not Claimed- Base Contract	179,711	177,361	(2,349)
0120.8220	Engineering Mechanical Pre-Construction	Base	Not Claimed- Base Contract	53,541	39,784	(13,757)
0120.8230	Engineering Electrical / I&C Pre-Construction	Base	Not Claimed- Base Contract	61,123	60,918	(204)
0121.1654	MFFF Operations Planning	Base	Not Claimed- Base Contract	11,426,550	10,880,272	(546,278)
0122.1611	PuO2 Polishing Planning	Base	Not Claimed- Base Contract	670,387	159,814	(510,573)
0122.1612	DUO2 Supply Planning	Base	Not Claimed- Base Contract	513,193	488,321	(24,872)
0123.1420	Up Front Design	Base	Not Claimed- Base Contract	-	2,823,111	2,823,111
0124.1415	DMO - Preserve The Option	Base	Not Claimed- Base Contract	-	3,134,723	3,134,723
0661.6101	Project Office Operations	Base	Not Claimed- Base Contract	6,289,830	6,418,213	128,382
0661.6102	Personnel Relocations	Base	Not Claimed- Base Contract	35,173	57,213	22,040
0661.6103	Project Support Services	Base	Not Claimed- Base Contract	-	97	97
0661.6105	Mixed Oxide (MOX) Proj. Ext. Communications	Base	Not Claimed- Base Contract	446,447	440,973	(5,474)
0661.6106	IT Labor	Base	Not Claimed- Base Contract	3,770,735	3,753,790	(16,945)
0661.6110	Independent Review Team (IRT) Review - NA54	Base	Not Claimed- Base Contract	1,475,958	1,486,360	10,402
0661.6150	Relocations	Base	Not Claimed- Base Contract	3,055,742	3,056,897	1,155
0662.6201	Project Controls & Integration	Base	Not Claimed- Base Contract	14,059,560	14,129,225	69,665
0662.6202	Risk Management	Base	Not Claimed- Base Contract	939,493	923,190	(16,303)
0663.6301	QA Program Management & Administration	Base	Not Claimed- Base Contract	604,125	597,540	(6,585)
0663.6302	Quality Engineering	Base	Not Claimed- Base Contract	1,209,198	1,224,692	15,494
0663.6303	Quality Verification	Base	Not Claimed- Base Contract	1,294,876	1,286,519	(8,358)
0664.6401	ES&H Integration	Base	Not Claimed- Base Contract	1,345,129	1,340,978	(4,151)
0664.6402	Regulatory Affairs Management & Admin.	Base	Not Claimed- Base Contract	452,998	431,238	(21,760)
0664.6403	Safety and Health	Base	Not Claimed- Base Contract	75	75	-
0664.6404	Incident Investigation / Corrective Action Program	Base	Not Claimed- Base Contract	-	(53)	(53)
0665.6501	Trade-off Studies	Base	Not Claimed- Base Contract	1,291	2,286	995

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				2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
0665.6502	Plutonium (Pu) Disposition Study	Base	Not Claimed- Base Contract	-	457	457
0665.6505	NA	Base	Not Claimed- Base Contract	-	-	-
0666.6600	Project Services & Administration	Base	Not Claimed- Base Contract	1,670	1,670	-
0666.6601	Contracts	Base	Not Claimed- Base Contract	18,707,760	19,104,032	396,272
0666.6602	Administration	Base	Not Claimed- Base Contract	2,923,771	2,607,252	(316,520)
0666.6603	Electronic Doc / Records Management	Base	Not Claimed- Base Contract	1,788,884	1,809,605	20,721
0666.6604	Training & Internal Communication	Base	Not Claimed- Base Contract	332,019	362,896	30,877
0666.6605	Project Accounting / Finance	Base	Not Claimed- Base Contract	2,928,733	2,912,125	(16,608)
0666.6606	Bank Analysis Fees	Base	Not Claimed- Base Contract	3,097	16,703	13,606
0666.6608	Procurement	Base	Not Claimed- Base Contract	3,014,377	3,027,990	13,614
0666.6609	Asset Management	Base	Not Claimed- Base Contract	294,085	287,005	(7,080)
0667.6701	Licensing	Base	Not Claimed- Base Contract	4,830	4,830	-
0668.6801	Charlotte Office Space	Base	Not Claimed- Base Contract	52,913	52,238	(675)
0668.6802	Furniture	Base	Not Claimed- Base Contract	33,304	33,304	0
0668.6803	Cabling & Telephone	Base	Not Claimed- Base Contract	0	(17,325)	(17,325)
0668.6804	UpFit	Base	Not Claimed- Base Contract	1,966	3,962	1,996
0668.6805	Relocation Services	Base	Not Claimed- Base Contract	1,917	2,456	540
0668.6806	Remote Location Office Space	Base	Not Claimed- Base Contract	46,201	46,201	(0)
0668.6810	Office Rent, Supplies, & Services	Base	Not Claimed- Base Contract	5,792,974	5,833,773	40,799
0668.6811	Office Equipment & Furniture Lease & Purchase	Base	Not Claimed- Base Contract	2,600,476	2,607,350	6,873
0668.6812	Computer Equipment and Software Leases & Purchases	Base	Not Claimed- Base Contract	8,071,682	8,043,555	(28,127)
0668.8810	Offsite Office Rent, Supplies & Services	Base	Not Claimed- Base Contract	3,293,692	3,331,590	37,897
0668.8811	Offsite Off.Equip.& Furnit. L. & P., and Workspace Upfit	Base	Not Claimed- Base Contract	326,998	328,503	1,504
0668.8812	Offsite Computer Equip.& Software L.& P.	Base	Not Claimed- Base Contract	728,823	749,822	20,999
0669.6901	Computer Hardware	Base	Not Claimed- Base Contract	74,662	74,923	262
0669.6902	Computer Software	Base	Not Claimed- Base Contract	21,584	21,717	133
0669.6903	Computer Services Contracts	Base	Not Claimed- Base Contract	17,602	18,228	627
0669.6904	Initial Setup	Base	Not Claimed- Base Contract	930	(9,464)	(10,394)
0670.8299	Process Unit Assembly Planning	Base	Not Claimed- Base Contract	2,246,073	2,234,104	(11,969)
1204.8240	PEG BOA's, Sole Source & Adv.Procure. Items	Base	Not Claimed- Base Contract	7,621,259	7,094,929	(526,330)
1204.8241	PEG Management	Base	Not Claimed- Base Contract	8,348,983	8,089,063	(259,920)
1204.8242	PEG Training & Technical Support	Base	Not Claimed- Base Contract	4,480,527	4,473,163	(7,364)
1204.8243	PEG Build to Print Manuf./Install. Required	Base	Not Claimed- Base Contract	413,137	420,711	7,574
1204.8244	PEG AP/MP Laboratory Design/Build	Base	Not Claimed- Base Contract	1,521,991	2,151,804	629,813
1204.8245	PEG Documents External Review Support	Base	Not Claimed- Base Contract	395,037	411,870	16,833
1204.8246	Process Support AP/MP Lab Design/Build	Base	Not Claimed- Base Contract	1,652,363	1,534,414	(117,949)
1204.8247	PreOpt1ACnstPrjctProcUnitPEGVendorDesign	Base	Not Claimed- Base Contract	21,166,096	36,139,755	14,973,659
1204.8248	PreOpt1BProcUnitsPEG Design/Bld UnitSpecs	Base	Not Claimed- Base Contract	7,837,333	10,069,627	2,232,294
1204.8249	PreOpt1ACnstPrjct Proc Units PEG ODCs	Base	Not Claimed- Base Contract	1,098,216	1,431,198	332,982
1204.8293	Mech/Struct Procurements Engineering	Base	Not Claimed- Base Contract	(21,951)	-	21,951
1205.8250	US Regulations/ Process Requirements	Base	Not Claimed- Base Contract	4,675,608	5,078,781	403,173
1205.8251	PreOpt1BConstPrjProc-USRG/PRG Req Mgmt	Base	Not Claimed- Base Contract	1,654,432	1,726,646	72,214
1205.8252	US Regulations Personnel	Base	Not Claimed- Base Contract	1,956,373	1,943,952	(12,421)
1205.8253	Process Requirements Personnel	Base	Not Claimed- Base Contract	4,240,835	4,723,359	482,524
1205.8254	Pre-Option 1A Construction Project Process-General Support	Base	Not Claimed- Base Contract	1,556,585	1,631,079	74,493
1205.8255	PreOpt1AConstPrjProc-USRG/PRG Admin Spt	Base	Not Claimed- Base Contract	213	254	41
1205.8256	Facility Design Group Support to PEG	Base	Not Claimed- Base Contract	434,416	582,035	147,619
1205.8257	Systems Engineering Group Support to I55EG	Base	Not Claimed- Base Contract	247,426	251,565	4,140
1205.8259	PreOpt1AConstPrjProc-USRG/PRG - ODCs	Base	Not Claimed- Base Contract	963,061	1,037,150	74,089
1209.8290	Pre-Option 1B MDG, SDG & PEG Management	Base	Not Claimed- Base Contract	4,856,102	4,788,660	(67,442)

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				2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1209.8291	DCS Equipment Group Management - ODCs	Base	Not Claimed- Base Contract	552,106	552,464	358
1211.8131	Project QA - Option 1	Base	Not Claimed- Base Contract	682,418	666,916	(15,501)
1211.8171	PreOp1BCnstPrjMgmtPurchs Procurement - Mgt & Admin	Base	Not Claimed- Base Contract	1,729,620	1,817,722	88,102
1212.8292	Commercial Grade Dedication (CGD)	Base	Not Claimed- Base Contract	1,354,743	12,377,050	11,022,307
1212.8293	Chemical/Mechanical Subcontract Technical Representatives (STRs) and	Base	Not Claimed- Base Contract	4,180,687	17,173,735	12,993,048
1212.8294	Electrical/I&C Procurements Engineering	Base	Not Claimed- Base Contract	4,309,747	9,268,521	4,958,774
1212.8295	PEG Support of Others (Facility Eq)	Base	Not Claimed- Base Contract	15,049	463	(14,586)
1212.8296	PassPort Implementation & Support Engineering	Base	Not Claimed- Base Contract	2,612,921	2,291,097	(321,824)
1212.8297	PEG - Vendor Support Activities for Self Procurements	Base	Not Claimed- Base Contract	345,639	13,490	(332,149)
1212.8298	PEG Management & Administration (Facility Eq)	Base	Not Claimed- Base Contract	1,421,186	1,271,685	(149,501)
1213.8292	PEG Technical Support & Training (Facility Eq)	Base	Not Claimed- Base Contract	-	591,906	591,906
1301.8302	DCS Integrated Mgt	Base	Not Claimed- Base Contract	5,815,155	6,536,527	721,373
1301.8303	MDG Support Services	Base	Not Claimed- Base Contract	2,268,635	2,554,857	286,222
1301.8304	MDG Travel & Relocation - DCS	Base	Not Claimed- Base Contract	3,186,264	2,923,393	(262,872)
1301.8305	Production Centers Mgt	Base	Not Claimed- Base Contract	1,839,335	1,834,853	(4,482)
1301.8306	MDG Travel & Relocation Production Centers	Base	Not Claimed- Base Contract	1,554,772	1,574,026	19,254
1301.8307	MDG ODCs Production Centers	Base	Not Claimed- Base Contract	3,245,262	2,907,943	(337,318)
1301.8308	MDG Procurement Engineering Support	Base	Not Claimed- Base Contract	836,816	806,667	(30,149)
1301.8390	Design Offices Mgt	Base	Not Claimed- Base Contract	12,182,827	13,209,064	1,026,237
1301.8391	Production Internal Support	Base	Not Claimed- Base Contract	9,622,880	11,044,415	1,421,535
1302.8302	GDE - Rod Decladding	Base	Not Claimed- Base Contract	-	-	-
1302.8309	Technical Management	Base	Not Claimed- Base Contract	14,129,663	14,604,868	475,205
1302.8310	Technical Requirement Representatives	Base	Not Claimed- Base Contract	3,732,781	3,394,330	(338,451)
1302.8391	GDE - Rod Decladding	Base	Not Claimed- Base Contract	-	-	-
1302.8392	Follow-up	Base	Not Claimed- Base Contract	9,395,507	11,387,710	1,992,202
1302.839A	TSR Support from PDG	Base	Not Claimed- Base Contract	669,122	495,197	(173,925)
1302.839B	LLP/LTP/NTP Detailed Piping Design	Base	Not Claimed- Base Contract	-	188,202	188,202
1303.8312	NDD - PuO2 Can Receiving & Emptying	Base	Not Claimed- Base Contract	887,937	1,180,158	292,221
1303.8313	NDP - Primary Dosing	Base	Not Claimed- Base Contract	2,623,186	3,075,251	452,065
1303.8314	NDS - Final Dosing	Base	Not Claimed- Base Contract	2,845,323	3,093,351	248,028
1303.8319	NTM - Jar Storage & Handling	Base	Not Claimed- Base Contract	3,351,931	4,266,963	915,032
1303.8320	NXR - Powder Auxiliary	Base	Not Claimed- Base Contract	1,458,995	2,032,952	573,957
1304.8311	DCE - PuO2 Buffer Storage	Base	Not Claimed- Base Contract	743,598	1,181,879	438,281
1304.8312	NDD Conformance	Base	Not Claimed- Base Contract	47,851	132,157	84,306
1304.8313	NDP Conformance	Base	Not Claimed- Base Contract	1,199	18,959	17,760
1304.8314	NDS Conformance	Base	Not Claimed- Base Contract	70,585	120,759	50,174
1304.8319	NTM Conformance	Base	Not Claimed- Base Contract	14,997	68,967	53,970
1304.831A	VDR Design	Base	Not Claimed- Base Contract	340,737	393,445	52,708
1304.831B	VDU Design	Base	Not Claimed- Base Contract	190,740	174,431	(16,309)
1304.831C	DCM Design	Base	Not Claimed- Base Contract	851,334	582,630	(268,704)
1304.831G	GMK Design	Base	Not Claimed- Base Contract	250,649	235,016	(15,633)
1304.831H	SCE Design	Base	Not Claimed- Base Contract	566,643	708,694	142,051
1304.831J	SMK Design	Base	Not Claimed- Base Contract	543,419	641,167	97,748
1304.831L	SXE Design	Base	Not Claimed- Base Contract	528,315	403,954	(124,361)
1304.831M	TAS Design	Base	Not Claimed- Base Contract	609,723	675,546	65,823
1304.831N	TCL/TCK/TGJ Design	Base	Not Claimed- Base Contract	727,871	644,809	(83,062)
1304.831P	TCP Design	Base	Not Claimed- Base Contract	336,594	371,805	35,211
1304.831Q	TGM Design	Base	Not Claimed- Base Contract	956,945	1,274,482	317,537
1304.831R	TGV Design	Base	Not Claimed- Base Contract	-	-	-
1304.831Y	LFX Design	Base	Not Claimed- Base Contract	225,927	277,136	51,209

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				2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1304.8320	NXR Conformance	Base	Not Claimed- Base Contract	-	2,071	2,071
1304.8321	NCR - Scrap Processing	Base	Not Claimed- Base Contract	3,343,517	4,035,217	691,700
1304.8324	PRE / PRF - Grinding	Base	Not Claimed- Base Contract	1,907,562	2,303,385	395,823
1304.8325	PTE/PTF — Pellet Inspect & Sorting	Base	Not Claimed- Base Contract	326,626	396,055	69,429
1304.8326	PQE — Quality Control & Manual Sorting	Base	Not Claimed- Base Contract	-	444,859	444,859
1304.8327	PAD - Pellet Repackaging	Base	Not Claimed- Base Contract	250,030	277,167	27,137
1304.8328	PAR - Scrap Box Loading	Base	Not Claimed- Base Contract	371,422	478,804	107,382
1304.8329	PSE - Green Pellet Storage	Base	Not Claimed- Base Contract	466,501	629,885	163,383
1304.832A	KCB Design	Base	Not Claimed- Base Contract	229,253	160,747	(68,506)
1304.832G	KDA Design	Base	Not Claimed- Base Contract	343,594	330,971	(12,623)
1304.8330	PSF - Sintered Pellet Storage	Base	Not Claimed- Base Contract	578,166	717,822	139,656
1304.8331	PSI - Scrape Pellet Storage	Base	Not Claimed- Base Contract	921,984	1,146,863	224,879
1304.8332	PSJ - Ground & Sorted Pellet Storage	Base	Not Claimed- Base Contract	712,294	985,943	273,648
1304.8333	PML - Pellet Handling	Base	Not Claimed- Base Contract	3,694,380	4,201,902	507,522
1304.8336	GDE - Rod Decladding	Base	Not Claimed- Base Contract	546,308	932,184	385,876
1304.8338	SEK Helium Leak Test	Base	Not Claimed- Base Contract	323,770	220,636	(103,134)
1304.8344	LCT - Test Line	Base	Not Claimed- Base Contract	553,058	951,193	398,135
1304.8345	VDR - Filter Dismantling	Base	Not Claimed- Base Contract	-	12	12
1304.8346	DDP - UO2 Drum Emptying	Base	Not Claimed- Base Contract	407,403	537,418	130,015
1304.8348	KDM Conformance	Base	Not Claimed- Base Contract	88,262	477,130	388,868
1304.8363	KDA - Decanning (B)	Base	Not Claimed- Base Contract	1,813,719	3,415,974	1,602,255
1304.8365	KPG Sampling, Automatic Conformance	Base	Not Claimed- Base Contract	196,230	668,054	471,824
1304.8370	KPA 4010 Purification Cycle Conformance	Base	Not Claimed- Base Contract	50,402	233,571	183,169
1304.8375	KDM - Milling (AFS) - PuO2 Can Handling	Base	Not Claimed- Base Contract	482,144	529,834	47,690
1304.8376	KDM 2000 - Prepolishing Milling Conformance	Base	Not Claimed- Base Contract	210,469	647,479	437,010
1304.8377	KDM 2200 Pre-Polishing Milling	Base	Not Claimed- Base Contract	569,061	707,373	138,312
1304.8378	KDR 1/2/3/4 ADO Conform	Base	Not Claimed- Base Contract	210,259	594	(209,665)
1304.8379	KDR - Recanning Unit	Base	Not Claimed- Base Contract	600,185	210,863	(389,322)
1304.8397	Struct. LLE - Aiken	Base	Not Claimed- Base Contract	352,677	305,686	(46,991)
1305.8315	LLP Pneumatic Transfer (33 mm)	Base	Not Claimed- Base Contract	1,397,356	1,807,734	410,378
1305.8316	LLP Pneumatic Transfer (76 mm)	Base	Not Claimed- Base Contract	738,814	986,221	247,407
1305.8318	NTP Pneumatic Transfer (133 mm)	Base	Not Claimed- Base Contract	785,457	1,085,049	299,592
1305.8325	PTE/PTF - Pellet Inspect & Sorting	Base	Not Claimed- Base Contract	1,667,730	1,593,203	(74,527)
1305.8326	PQE - QC & Manual Sorting	Base	Not Claimed- Base Contract	1,437,808	1,186,020	(251,789)
1305.8361	KCB - PuO2 Homogenization & Sampling	Base	Not Claimed- Base Contract	1,464,913	1,876,771	411,858
1305.8362	KCC - Canning	Base	Not Claimed- Base Contract	1,579,664	1,841,250	261,586
1305.8365	KPG - Liquid Sampling (W1)	Base	Not Claimed- Base Contract	938,353	900,405	(37,948)
1305.8366	KDB/KPF Electrolyzers (W9)	Base	Not Claimed- Base Contract	1,233,421	1,365,619	132,198
1305.8367	KCA - Oxalic Precip Metering Wheels	Base	Not Claimed- Base Contract	687,971	821,657	133,686
1305.8368	KDA - Dosing Hoppers (W6)	Base	Not Claimed- Base Contract	1,841,117	2,271,901	430,784
1305.8369	KPA/KPB - Settler Mixers (W7)	Base	Not Claimed- Base Contract	852,049	911,336	59,287
1305.8370	KPA 4010 Purification Cycle	Base	Not Claimed- Base Contract	394,454	377,100	(17,354)
1305.8371	KCA - Oxalic Precip Oxid Precip & Filter	Base	Not Claimed- Base Contract	552,846	718,321	165,475
1305.8372	KCA - Oxalic Precip Oxid Calcin Furn.	Base	Not Claimed- Base Contract	823,556	906,346	82,790
1305.8373	KCB - PuO2 Tumbler Mixer	Base	Not Claimed- Base Contract	543,854	532,877	(10,976)
1305.8374	KDD - Declorination / Dissolution	Base	Not Claimed- Base Contract	2,545,246	3,076,733	531,487
1305.8376	KDM - Milling (AFS)	Base	Not Claimed- Base Contract	1,994,225	1,955,112	(39,113)
1305.8378	KDR - Recanning Unit	Base	Not Claimed- Base Contract	1,587,663	1,711,309	123,646
1305.8380	KPB 1000 Solvent Recovery	Base	Not Claimed- Base Contract	687,875	779,190	91,315
1305.8381	KDM-Pre-Polishing MillingUnits6000-7400 Dsgn	Base	Not Claimed- Base Contract	1,156,174	1,119,284	(36,889)

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				2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1305.8399	Dosing Hopper - Structural Qualification	Base	Not Claimed- Base Contract	55,200	48,456	(6,744)
1306.8322	NPE/NPF - Homogenization & Pelletizing	Base	Not Claimed- Base Contract	1,439,711	1,439,629	(82)
1306.8323	PFE/PFF - Sintering Furnace	Base	Not Claimed- Base Contract	8	8	0
1306.8334	GME - Rod Cladding & Decontamination	Base	Not Claimed- Base Contract	5,886,780	6,773,734	886,955
1306.8339	SDK - Rod Inspection & Sorting	Base	Not Claimed- Base Contract	1,120,227	1,341,572	221,346
1306.8347	NBX/NBY - Ball Mining	Base	Not Claimed- Base Contract	2,287,881	2,641,655	353,774
1306.8348	KDM - Milling	Base	Not Claimed- Base Contract	901,055	937,277	36,222
1306.8349	NPG/H/I-Homogenization & Pelletizing Design	Base	Not Claimed- Base Contract	4,875,339	5,925,669	1,050,330
1306.8398	Struct. LLE - Bagnol	Base	Not Claimed- Base Contract	586,697	957,492	370,795
1307.831A	VDR	Base	Not Claimed- Base Contract	(99,558)	314,988	414,546
1307.831B	VDU	Base	Not Claimed- Base Contract	(51,218)	203,988	255,206
1307.831C	DCM	Base	Not Claimed- Base Contract	188,956	186,681	(2,275)
1307.831D	DCP	Base	Not Claimed- Base Contract	-	-	-
1307.831E	VDQ	Base	Not Claimed- Base Contract	-	-	-
1307.831F	VDT	Base	Not Claimed- Base Contract	-	-	-
1307.831G	GMK	Base	Not Claimed- Base Contract	26,858	152,250	125,392
1307.831H	SCE	Base	Not Claimed- Base Contract	370,314	-	(370,314)
1307.831J	SMK	Base	Not Claimed- Base Contract	401,273	188,086	(213,187)
1307.831K	STK	Base	Not Claimed- Base Contract	349,931	166,743	(183,188)
1307.831L	SXE	Base	Not Claimed- Base Contract	98,936	-	(98,936)
1307.831M	TAS	Base	Not Claimed- Base Contract	414	-	(414)
1307.831N	TCL/TCK/TGJ	Base	Not Claimed- Base Contract	572,675	-	(572,675)
1307.831P	TCP	Base	Not Claimed- Base Contract	7,405	249,043	241,638
1307.831Q	TGM	Base	Not Claimed- Base Contract	83,776	26,121	(57,655)
1307.831R	TGV	Base	Not Claimed- Base Contract	25,009	-	(25,009)
1307.831S	Grp 5.1	Base	Not Claimed- Base Contract	-	-	-
1307.831T	Grp 5.2	Base	Not Claimed- Base Contract	-	-	-
1307.831U	Grp 5.3	Base	Not Claimed- Base Contract	-	-	-
1307.831X	Grp 5.6	Base	Not Claimed- Base Contract	-	-	-
1307.831Y	Grp 5.8 / LFX	Base	Not Claimed- Base Contract	(100,098)	-	100,098
1307.832A	KCB	Base	Not Claimed- Base Contract	(37,503)	-	37,503
1307.832B	KCD	Base	Not Claimed- Base Contract	-	-	-
1307.832C	KPA	Base	Not Claimed- Base Contract	-	-	-
1307.832D	KPB	Base	Not Claimed- Base Contract	-	-	-
1307.832E	KPC	Base	Not Claimed- Base Contract	-	-	-
1307.832F	KWD	Base	Not Claimed- Base Contract	-	-	-
1307.832G	KDA	Base	Not Claimed- Base Contract	(186,468)	-	186,468
1308.832A	KCB	Base	Not Claimed- Base Contract	-	-	-
1308.832B	KCD	Base	Not Claimed- Base Contract	-	-	-
1308.832C	KPA	Base	Not Claimed- Base Contract	-	-	-
1308.832D	KPB	Base	Not Claimed- Base Contract	-	-	-
1308.832E	KPC	Base	Not Claimed- Base Contract	-	-	-
1308.832F	KWD	Base	Not Claimed- Base Contract	-	-	-
1308.832G	KDA	Base	Not Claimed- Base Contract	-	-	-
1308.832H	Grp 5.4	Base	Not Claimed- Base Contract	-	-	-
1308.832J	Grp 5.5	Base	Not Claimed- Base Contract	-	-	-
1309.839C	DCP Design	Base	Not Claimed- Base Contract	1,233,174	1,509,027	275,853
1309.839D	SXE DCR 10-0422	Base	Not Claimed- Base Contract	41,004	175,664	134,660
1309.83KU	K Unit Pumps and Valves Design	Base	Not Claimed- Base Contract	3,001,805	2,048,230	(953,575)
1310.83JL	JLE and LT TA VAR	Base	Not Claimed- Base Contract	-	501,479	501,479

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1310.83LB	Lab Unit Glovebox Design	Base	Not Claimed- Base Contract	6,838,818	4,692,873	(2,145,945)
1310.83LE	Laboratory Responsible Engineers and STRs	Base	Not Claimed- Base Contract	713,444	1,893,632	1,180,188
1310.83TS	Task Support Requests	Base	Not Claimed- Base Contract	1,720,793	606,129	(1,114,664)
1311.83MF	Multi Fuel Design - DCRs	Base	Not Claimed- Base Contract	-	1,091,946	1,091,946
1400.8401	SDG Base Contract Pre-FY 2003	Base	Not Claimed- Base Contract	-	-	-
1401.8402	Management	Base	Not Claimed- Base Contract	10,336,701	15,178,727	4,842,026
1401.8403	Support Services	Base	Not Claimed- Base Contract	10,828,126	16,693,729	5,865,603
1401.8404	SDG Travel & Relocation DCS	Base	Not Claimed- Base Contract	2,797,063	3,595,869	798,807
1401.8405	Facility Space, Utilities Supplies & Services	Base	Not Claimed- Base Contract	584,903	585,591	687
1401.8418	Design Reviews	Base	Not Claimed- Base Contract	554,699	421,952	(132,747)
1401.8419	PLC & Supervisor for Fire Safety	Base	Not Claimed- Base Contract	-	-	-
1402.8406	Platform Hardware & Maintenance	Base	Not Claimed- Base Contract	5,668,945	4,064,808	(1,604,137)
1402.8407	Platform Hardware & Maintenance - Aiken	Base	Not Claimed- Base Contract	2,974,087	9,885,980	6,911,893
1402.8408	SDG Procurement Engineering Support	Base	Not Claimed- Base Contract	2,643,073	2,118,987	(524,085)
1402.8410	Standards	Base	Not Claimed- Base Contract	5,551,916	6,652,081	1,100,165
1402.8411	Networks	Base	Not Claimed- Base Contract	565,490	846,427	280,936
1402.8413	Laboratory Information Management System (LIMS)	Base	Not Claimed- Base Contract	1,086,571	2,159,452	1,072,881
1402.8414	Process PCs	Base	Not Claimed- Base Contract	3,867,684	2,715,494	(1,152,189)
1402.8417	RESERVED	Base	Not Claimed- Base Contract	-	-	-
1402.8477	PLC & Supervisor for Unit KWC	Base	Not Claimed- Base Contract	2,632	-	(2,632)
1402.8490	Simulation & Testing	Base	Not Claimed- Base Contract	2,350,845	3,516,527	1,165,682
1402.8497	CGD Embedded Software Evaluation Support	Base	Not Claimed- Base Contract	-	-	-
1403.8412	Manufacturing Management Information System (MMIS)	Base	Not Claimed- Base Contract	8,166,997	11,834,983	3,667,987
1404.8420	PLC's General	Base	Not Claimed- Base Contract	6,273,187	9,163,751	2,890,565
1404.8421	PLC & Supervisor for Unit DRS/DDP	Base	Not Claimed- Base Contract	265,395	317,978	52,583
1404.8422	PLC & Supervisor for Unit DCP/DCM	Base	Not Claimed- Base Contract	285,618	465,729	180,111
1404.8423	PLC & Supervisor for Unit DCE/NTF	Base	Not Claimed- Base Contract	359,379	542,483	183,104
1404.8424	PLC & Supervisor for Unit NDD	Base	Not Claimed- Base Contract	438,978	786,601	347,623
1404.8425	PLC & Supervisor for Unit NDP	Base	Not Claimed- Base Contract	682,677	1,075,897	393,220
1404.8426	PLC & Supervisor for Unit NBX/NBY	Base	Not Claimed- Base Contract	498,276	711,638	213,362
1404.8427	PLC & Supervisor for Unit NDS	Base	Not Claimed- Base Contract	669,188	1,036,479	367,291
1404.8428	PLC & Supervisor for Unit NXR	Base	Not Claimed- Base Contract	539,770	785,887	246,117
1404.8429	PLC & Supervisor for Unit NCR	Base	Not Claimed- Base Contract	468,698	803,389	334,691
1404.8430	PLC & Supervisor for Unit NTM	Base	Not Claimed- Base Contract	802,903	1,069,351	266,448
1404.8431	PLC & Supervisor for Unit NPE/NPF	Base	Not Claimed- Base Contract	1,006,420	1,530,655	524,235
1404.8432	PLC & Supervisor for Unit LTP	Base	Not Claimed- Base Contract	314,862	457,658	142,795
1404.8433	PLC & Supervisor for Unit PFE/PFF	Base	Not Claimed- Base Contract	917,858	1,351,119	433,261
1404.8434	PLC & Supervisor for Unit PRE/PRF	Base	Not Claimed- Base Contract	685,882	863,994	178,112
1404.8435	PLC & Supervisor for Unit PTE/PTF	Base	Not Claimed- Base Contract	572,730	976,017	403,287
1404.8436	PLC & Supervisor for Unit PQE	Base	Not Claimed- Base Contract	498,246	690,866	192,620
1404.8437	PLC & Supervisor for Unit PAD	Base	Not Claimed- Base Contract	345,162	717,963	372,801
1404.8438	PLC & Supervisor for Unit PAR	Base	Not Claimed- Base Contract	268,538	358,147	89,609
1404.8439	PLC & Supervisor for Unit PSE	Base	Not Claimed- Base Contract	313,991	509,018	195,027
1404.8440	PLC & Supervisor for Unit PSF	Base	Not Claimed- Base Contract	291,444	445,990	154,546
1404.8441	PLC & Supervisor for Unit PSI	Base	Not Claimed- Base Contract	520,594	699,084	178,490
1404.8442	PLC & Supervisor for Unit PSJ	Base	Not Claimed- Base Contract	294,578	346,367	51,789
1404.8443	PLC & Supervisor for Unit GME/GMF	Base	Not Claimed- Base Contract	1,036,693	2,391,966	1,355,273
1404.8444	PLC & Supervisor for Unit GMK	Base	Not Claimed- Base Contract	330,859	429,250	98,391
1404.8445	PLC & Supervisor for Unit GDE	Base	Not Claimed- Base Contract	252,310	382,174	129,864
1404.8446	PLC & Supervisor for Unit SXE	Base	Not Claimed- Base Contract	301,398	312,383	10,985

CB&I AREVA MOX Services, LLC.
MFFF Project Cost Growth by Cost Account and Claim Category

Schedule 1.31

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = B - A
				2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1404.8447	PLC & Supervisor for Unit SEK	Base	Not Claimed- Base Contract	213,769	501,346	287,577
1404.8448	PLC & Supervisor for Unit SDK	Base	Not Claimed- Base Contract	480,030	854,364	374,334
1404.8449	PLC & Supervisor for Unit SCE	Base	Not Claimed- Base Contract	280,661	389,985	109,324
1404.8450	PLC & Supervisor for Unit SMK/STK	Base	Not Claimed- Base Contract	264,614	444,178	179,564
1404.8451	PLC & Supervisor for Unit TGM	Base	Not Claimed- Base Contract	329,704	511,706	182,002
1404.8452	PLC & Supervisor for Unit TGV	Base	Not Claimed- Base Contract	365,675	76,311	(289,365)
1404.8453	PLC & Supervisor for Unit TAS	Base	Not Claimed- Base Contract	323,296	589,992	266,696
1404.8454	PLC & Supervisor for Unit TCK	Base	Not Claimed- Base Contract	232,217	216,548	(15,669)
1404.8455	PLC & Supervisor for Unit TCP	Base	Not Claimed- Base Contract	293,119	454,702	161,583
1404.8456	PLC & Supervisor for Unit TCL/TGJ	Base	Not Claimed- Base Contract	260,094	307,091	46,997
1404.8457	PLC & Supervisor for Unit TXE	Base	Not Claimed- Base Contract	-	-	-
1404.8458	PLC & Supervisor for Unit LCT	Base	Not Claimed- Base Contract	233,520	95,641	(137,879)
1404.8459	PLC & Supervisor for Unit VDQ	Base	Not Claimed- Base Contract	289,040	-	(289,040)
1404.8460	PLC & Supervisor for Unit VDT	Base	Not Claimed- Base Contract	272,705	383,623	110,918
1404.8461	PLC & Supervisor for Unit VDR/VDU	Base	Not Claimed- Base Contract	307,916	29,649	(278,267)
1404.8485	PLC & Supervisor for Fire Safety	Base	Not Claimed- Base Contract	112,727	42,505	(70,222)
1404.8486	PLC & Supervisor for LGF	Base	Not Claimed- Base Contract	248,541	305,291	56,750
1404.8487	M&I - PRE/PRF	Base	Not Claimed- Base Contract	22,704	-	(22,704)
1405.8462	PLC & Supervisor for Unit KDD	Base	Not Claimed- Base Contract	618,915	863,150	244,235
1405.8463	PLC & Supervisor for Unit KDA	Base	Not Claimed- Base Contract	1,227,686	1,813,250	585,564
1405.8464	PLC & Supervisor for Unit KDB	Base	Not Claimed- Base Contract	362,161	455,895	93,734
1405.8466	PLC & Supervisor for Unit KPA	Base	Not Claimed- Base Contract	802,321	926,538	124,217
1405.8467	PLC & Supervisor for Unit KPB	Base	Not Claimed- Base Contract	294,556	317,577	23,021
1405.8468	PLC & Supervisor for Unit KPC	Base	Not Claimed- Base Contract	450,704	391,037	(59,667)
1405.8469	PLC for Unit LFX	Base	Not Claimed- Base Contract	145,197	45,858	(99,339)
1405.8470	PLC & Supervisor for Unit KPG	Base	Not Claimed- Base Contract	459,965	650,175	190,210
1405.8471	PLC & Supervisor for Unit LLP	Base	Not Claimed- Base Contract	361,211	703,119	341,908
1405.8472	PLC & Supervisor for Unit KCA	Base	Not Claimed- Base Contract	369,527	481,004	111,477
1405.8473	PLC & Supervisor for Unit KCB	Base	Not Claimed- Base Contract	463,461	714,164	250,703
1405.8474	PLC & Supervisor for Unit KCC	Base	Not Claimed- Base Contract	440,253	545,313	105,060
1405.8475	PLC & Supervisor for Unit KCD	Base	Not Claimed- Base Contract	374,760	395,510	20,750
1405.8476	PLC & Supervisor for Unit KWD	Base	Not Claimed- Base Contract	308,186	336,167	27,981
1405.8477	PLC & Supervisor for Unit KWG	Base	Not Claimed- Base Contract	360,871	373,415	12,545
1405.8478	PLC & Supervisor for Unit KDM	Base	Not Claimed- Base Contract	976,950	2,322,500	1,345,550
1405.8480	PLC & Sup. for Unit KUA/KUB/KUD/KUG/KUH	Base	Not Claimed- Base Contract	922,792	567,817	(354,975)
1405.8481	PLC & Supervisor for Ventilation	Base	Not Claimed- Base Contract	1,624,291	1,090,387	(533,904)
1405.8482	PLC & Supervisor for Electrical Distribution	Base	Not Claimed- Base Contract	734,153	513,569	(220,584)
1405.8483	PLC & Supervisor for Fluids	Base	Not Claimed- Base Contract	1,145,980	656,234	(489,746)
1405.8484	PLC & Supervisor for Unit KDR	Base	Not Claimed- Base Contract	401,926	53,068	(348,858)
1405.8486	PLC & Supervisor for LGF	Base	Not Claimed- Base Contract	-	-	-
1405.8490	Simulation & Testing	Base	Not Claimed- Base Contract	-	-	-
1405.8494	Independent Software Verification & Validation	Base	Not Claimed- Base Contract	-	-	-
1405.8496	SPLC Procurement Contract Oversight	Base	Not Claimed- Base Contract	1,015,728	12,237,107	11,221,379
1405.8497	CGD Embedded Software Evaluation Support	Base	Not Claimed- Base Contract	-	662,001	662,001
1406.8419	Software Analysis & Translation	Base	Not Claimed- Base Contract	2,911,338	2,911,871	533
1407.8409	PLC & Supervisor for Fire Safety	Base	Not Claimed- Base Contract	-	-	-
Base Subtotal				\$ 872,066,279	\$ 1,050,750,205	\$ 178,683,926
MFFF Project Total				\$ 3,650,888,759	\$ 6,614,501,585	\$ 2,963,612,827

CB&I AREVA MOX Services, LLC.
MFFF Project Cost Growth by Cost Account and Claim Category

Schedule 1.31

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = B - A
				2007 Baseline	2012 Rebaseline with Addendum	Cost Growth

Sources:
[A] May 2007 PRISM Data adjusted for budget transfers between July 2007 and September 2012
[B] 2012 contract proposal value as stated in December 2012 PRISM data and adjusted for 2012 Rebaseline Addendums
[C] Calculated

CB&I AREVA MOX Services, LLC.
MFFF 2012 Rebaseline with Addendum Project Cost by Cost Account

Schedule 1.4

Cost Account	Cost Account Description	Contract	Claim Category	[A]		[B]		[C] = [A]+[B]	
				2012 Rebaseline		2012 Rebaseline Addendum		2012 Rebaseline with Addendum	
1003.8033	PUDC Procurement & Fabrication Support	Option 1	Process Units	\$	11,010,319	\$	-	\$	11,010,319
1004.8043	PUDC Site Construction Support	Option 1	Process Units		38,089,073		-		38,089,073
1004.8045	Software	Option 1	Process Units		15,422,427		-		15,422,427
1005.8056	PUDC Startup Support	Option 1	Process Units		19,280,579		-		19,280,579
1600.8601	Management / Admin	Option 1	Process Units		8,552,989		1,273,387		9,826,376
1600.8602	Project Controls	Option 1	Process Units		8,830,471		611,276		9,441,747
1600.8603	QA / QC	Option 1	Process Units		88,152		-		88,152
1601.8611	Business Travel	Option 1	Process Units		4,996,494		601,395		5,597,889
1602.8621	Supervision / Admin	Option 1	Process Units		4,493,560		-		4,493,560
1603.8631	Supervision / Admin	Option 1	Process Units		7,091,522		-		7,091,522
1603.8632	Job Living Expense	Option 1	Process Units		418,575		-		418,575
1603.8641	Management / Admin	Option 1	Process Units		-		-		-
1604.8641	Team Center Initiative	Option 1	Process Units		315,244		-		315,244
1605.8645	CA - NRC/CGIE - PUDC Support	Option 1	Process Units		5,663,563		-		5,663,563
1618.8748	PAD - Preplanning	Option 1	Process Units		-		-		-
1618.8749	PAR - Preplanning	Option 1	Process Units		-		-		-
1623.8785	Process Assembly Facilities	Option 1	Process Units		33,434,879		-		33,434,879
1701.8701	KCB - Homogenization - Sampling	Option 1	Process Units		6,460,991		(2,300)		6,458,691
1701.8702	KCC - PuO2 Decanning	Option 1	Process Units		4,995,575		(2,448)		4,993,127
1701.8703	KDA - PUO2 Decanning	Option 1	Process Units		18,004,798		1,425,471		19,430,268
1701.8704	KDM - Pre-Polishing Milling	Option 1	Process Units		28,577,139		4,207,320		32,784,460
1701.8705	KDR - Recanning	Option 1	Process Units		218,290		(79)		218,211
1701.8706	KPA GB 4010	Option 1	Process Units		2,642,021		(110,492)		2,531,529
1701.8751		Option 1	Process Units		-		-		-
1701.8777	KPG - Sampling Automatic	Option 1	Process Units		6,213,770		736,722		6,950,492
1701.8795	Long Lead Procurements	Option 1	Process Units		-		-		-
1702.8707	KCB 5000 Manufacturing	Option 1	Process Units		700,137		(49,369)		650,769
1702.8708		Option 1	Process Units		-		-		-
1702.8709		Option 1	Process Units		-		-		-
1702.8710		Option 1	Process Units		-		-		-
1702.8711		Option 1	Process Units		-		-		-
1702.8712	VDR - Filter Dismantling	Option 1	Process Units		61,433		-		61,433
1702.8713	VDU - Maintenance & Mechanical Dismantling	Option 1	Process Units		20,269		-		20,269
1702.8714		Option 1	Process Units		-		-		-
1703.8715	DCM - PuO2 3013 Storage	Option 1	Process Units		6,110,439		910,079		7,020,517
1703.8716	DCP - PuO2 Receiving	Option 1	Process Units		5,555,224		735,048		6,290,272
1703.8717	KDA - PUO2 Decanning (EQ - 6000 Density Measurement)	Option 1	Process Units		702,165		102,015		804,180
1703.8718		Option 1	Process Units		-		-		-
1703.8719		Option 1	Process Units		-		-		-
1704.8720	SDK - Rod Inspection and Sorting	Option 1	Process Units		2,370,253		2,759		2,373,011
1704.8721	SEK - Helium Leak Test	Option 1	Process Units		1,516,452		220,756		1,737,208
1705.8722	GMK - Rod Tray Loading	Option 1	Process Units		1,126,504		35,886		1,162,390
1705.8723	SCE - Rod Scanning	Option 1	Process Units		3,268,302		156,557		3,424,860
1705.8724	SMK - Rod Tray Handling	Option 1	Process Units		2,050,666		437,502		2,488,168
1705.8725	STK - Rod Storage	Option 1	Process Units		4,021,354		204,924		4,226,278
1705.8726	SXE - X Ray Inspection	Option 1	Process Units		2,200,967		164,450		2,365,417
1705.8727	TAS - Assembly Handling and Storage	Option 1	Process Units		8,746,060		612,163		9,358,223

CB&I AREVA MOX Services, LLC.

Schedule 1.4

MFFF 2012 Rebaseline with Addendum Project Cost by Cost Account

Cost Account	Cost Account Description	Contract	Claim Category	[A] [B] [C] = [A]+[B]		
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
1705.8728	TCK - Assembly Dry Cleaning	Option 1	Process Units	831,891	(85,910)	745,981
1705.8729	TCL - Assembly Final Inspection	Option 1	Process Units	1,188,159	86,862	1,275,021
1705.8730	TGJ - Reserve Pit	Option 1	Process Units	358,421	-	358,421
1705.8731	TCP - Assembly Dimensional Inspection	Option 1	Process Units	2,096,378	(8,584)	2,087,795
1705.8732	TGM - Assembly Mockup Loading	Option 1	Process Units	2,788,742	107,270	2,896,012
1705.8733	TGV - Assembly Mounting	Option 1	Process Units	761,447	55,824	817,271
1706.8734	PSE - Green Pellet Storage	Option 1	Process Units	7,971,103	(245,815)	7,725,288
1706.8735	PSF - Sintering Pellet Storage	Option 1	Process Units	7,934,901	(389,812)	7,545,089
1706.8736	PSI - Scrap Pellet Storage	Option 1	Process Units	8,666,368	(340,288)	8,326,080
1706.8737	PSJ - Ground & Sorted Pellet Storage	Option 1	Process Units	7,977,167	723,484	8,700,651
1707.8738	Lab Equip - LRD/LPG/LBT/LAC/KLN/KLL/KLK/KLH	Option 1	Process Units	8,283,907	985,833	9,269,740
1707.8739	Lab Equip - LME/LAU/FLT	Option 1	Process Units	4,954,948	550,206	5,505,154
1707.8740	Lab Equip - LSR/LCP/KLJ	Option 1	Process Units	8,914,063	1,944,369	10,858,433
1707.8741	Lab Equip - LPS/LET/LER/LDS/KLM/KLF/KLB/KLC/KLD	Option 1	Process Units	10,784,091	2,224,365	13,008,455
1707.8742	Lab Equip - KLO/KLI/KLG/KLA/KLE	Option 1	Process Units	8,914,177	1,411,224	10,325,401
1707.8743	Lab Equip - LSG/LLI	Option 1	Process Units	641,331	-	641,331
1707.8744	Lab Equip - LFX	Option 1	Process Units	2,141,710	227,001	2,368,710
1708.8745	DCE - PUO2 Buffer Storage	Option 1	Process Units	11,028,503	834,042	11,862,545
1708.8746	GDE - Rod Decladding	Option 1	Process Units	2,839,628	938,414	3,778,042
1708.8747	GME - Rod Cladding and Decontamination	Option 1	Process Units	24,887,266	1,621,347	26,508,613
1708.8748	PAD - Preplanning	Option 1	Process Units	2,096,746	17,801	2,114,547
1708.8749	PAR - Preplanning	Option 1	Process Units	2,061,538	(15,095)	2,046,442
1708.8750	PML - Pellet Handling	Option 1	Process Units	23,423,047	3,107,163	26,530,210
1708.8751	PQE - Quality Control & Manual Sorting	Option 1	Process Units	4,197,483	3,235,272	7,432,755
1708.8752	PRE - Pellet Grinding	Option 1	Process Units	7,057,830	(16,839)	7,040,991
1708.8753	PRF - Pellet Grinding	Option 1	Process Units	6,589,086	337,726	6,926,812
1708.8754	PTE - Pellet Inspection & Sorting	Option 1	Process Units	5,809,385	(3,310)	5,806,075
1708.8755	PTF - Pellet Inspection & Sorting	Option 1	Process Units	5,397,121	296,665	5,693,786
1709.8756	DDP - UO2 Drum Emptying	Option 1	Process Units	2,148,561	709,672	2,858,233
1709.8757	LCT - Test Line (part of laboratory)	Option 1	Process Units	2,620,521	454,130	3,074,651
1709.8758	NBX - Primary Blend Ball Milling	Option 1	Process Units	3,504,186	312,996	3,817,183
1709.8759	NBY - Scrap Ball Milling	Option 1	Process Units	2,665,843	567,828	3,233,671
1709.8760	NCR - Scrap Processing	Option 1	Process Units	6,565,420	2,469,813	9,035,233
1709.8761	NDD - PUO2 Can Receiving and Emptying	Option 1	Process Units	3,158,290	645,475	3,803,765
1709.8762	NDP - Primary Dosing	Option 1	Process Units	8,374,307	3,803,209	12,177,516
1709.8763	NDS - Final Dosing	Option 1	Process Units	10,860,994	4,364,668	15,225,662
1709.8764	NTM - Jar Storage and Handling	Option 1	Process Units	17,976,068	9,085,523	27,061,590
1709.8765	NXR - Powder Auxiliary	Option 1	Process Units	4,965,186	1,975,494	6,940,680
1710.8766	NPG - Homogenization & Pelletizing	Option 1	Process Units	13,222,976	1,184,650	14,407,626
1710.8767	NPH - Homogenization & Pelletizing	Option 1	Process Units	12,748,691	1,210,439	13,959,131
1710.8768	NPI - Homogenization & Pelletizing	Option 1	Process Units	2,312,970	(832)	2,312,137
1711.8769	KLA - Precipitation - Filtration - Oxidation	Option 1	Process Units	7,093,160	1,427,685	8,520,845
1711.8770	KCB GB1000 - Homogenization - Sampling	Option 1	Process Units	2,400,481	279,260	2,679,741
1711.8771	KDA - PUO2 Decanning	Option 1	Process Units	759,053	239,438	998,491
1711.8772	KDB - Dissolution	Option 1	Process Units	7,725,070	1,866,816	9,591,887
1711.8773	KDD - Dissolution of Chlorinated Feed	Option 1	Process Units	16,174,055	4,404,511	20,578,565
1711.8774	KDM - Pre-Polishing Milling (GB6400/7400)	Option 1	Process Units	1,004,935	375,657	1,380,592

CB&I AREVA MOX Services, LLC.

Schedule 1.4

MFFF 2012 Rebaseline with Addendum Project Cost by Cost Account

Cost Account	Cost Account Description	Contract	Claim Category	[C] = [A]+[B]		
				[A]	[B]	[C]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
1711.8775	KPA GB4000	Option 1	Process Units	2,496,644	882,101	3,378,746
1711.8776	KPB GB1000	Option 1	Process Units	1,409,807	368,014	1,777,821
1711.8777	KPG - Sampling Automatic	Option 1	Process Units	55,253	-	55,253
1711.8778	LLP - Pneumatic Transfer (33mm, PUO2 cans) Equipment	Option 1	Process Units	6,088,458	763,577	6,852,035
1711.8779	LTP - Pneumatic Transfer (76mm, PUO2 cans) Equipment	Option 1	Process Units	4,299,047	106,618	4,405,665
1711.8780	NTP - Pneumatic Transfer (133mm, PUO2 cans) Equipment	Option 1	Process Units	6,974,766	(301,158)	6,673,608
1712.8781	NPP - Additives Preparation	Option 1	Process Units	1,161,650	-	1,161,650
1712.8782	PFE/PFF - Sintering Furnace	Option 1	Process Units	65,184,914	6,288,048	71,472,962
1712.8783	TXE - Assembly Packaging	Option 1	Process Units	1,416,342	68,235	1,484,577
1712.8784	DRS - UO2 Receiving and Storage	Option 1	Process Units	-	-	-
1712.8786	PFF - Sintering Furnace	Option 1	Process Units	-	-	-
1713.8790	Process Unit Support	Option 1	Process Units	6,239,241	-	6,239,241
1713.8791	Assembly Suspense Accounts	Option 1	Process Units	-	-	-
1714.8708	KCD - Oxalic Mother Liquors Recovery Unit	Option 1	Process Units	745,564	(2,898)	742,665
1714.8709	KPA (GB2000, 2010, 3000, 8000, 8510) Purification Cycle	Option 1	Process Units	3,154,417	119,541	3,273,958
1714.8710	KPC - Nitric Acid Recovery Liquid Ring Pump GB	Option 1	Process Units	742,421	27,060	769,481
1714.8711	KWD - Aqueous Waste Reception	Option 1	Process Units	1,240,513	36,314	1,276,827
1714.8714	KPB (GB2000) Solvent Recovery Unit	Option 1	Process Units	535,695	28,505	564,199
1715.8716	DCP - PuO2 Receiving	Option 1	Process Units	157,000	-	157,000
1715.8718	VDQ Waste Storage	Option 1	Process Units	639	-	639
1715.8719	VDT Waste Nuclear Count - Drum Hdling & NDA P	Option 1	Process Units	4,168,817	299,190	4,468,007
1716.8791	Assembly BOAs Accounts	Option 1	Process Units	50,274,011	-	50,274,011
1716.8795	Long Lead Procurements	Option 1	Process Units	47,172,382	1,933,293	49,105,674
1716.8796	ATG Spares Procurements	Option 1	Process Units	5,187,473	-	5,187,473
1717.8792	Self-Perform Suspense Accounts	Option 1	Process Units	726,190	-	726,190
1717.8793	Design Modifications	Option 1	Process Units	373,013	-	373,013
1717.8797	Unexpected Outsource Costs	Option 1	Process Units	192,886	-	192,886
1717.8798	Duty and Shipping Costs	Option 1	Process Units	2,461,227	-	2,461,227
1717.8799	REA Exposure	Option 1	Process Units	22,390,845	(22,390,845)	-
1717.87MA	Maintenance Program, Layup/In-Storage	Option 1	Process Units	340,078	-	340,078
1745.4500	MP Dismantling Units	Option 1	Process Units	-	-	-
1745.4510	MP Receiving & Storage Units	Option 1	Process Units	-	-	-
1745.4520	MP Ball Milling & Pneumatic Transfers	Option 1	Process Units	-	-	-
1745.4530	MP Sintering Furnaces	Option 1	Process Units	-	-	-
1745.4540	MP Powder & Pellets	Option 1	Process Units	-	-	-
1745.4550	MP Pellet Storage	Option 1	Process Units	-	-	-
1745.4570	MP Rods & Assemblies	Option 1	Process Units	-	-	-
1745.4580	MP Assembly Packaging Crane	Option 1	Process Units	-	-	-
1745.4590	MP Laboratories	Option 1	Process Units	-	-	-
Process Units - Direct Subtotal				\$ 805,317,150	\$ 53,474,262	\$ 858,791,412
0601.6000	Project Office Operations	Option 1	Hotel Load	\$ 9,225,064	\$ -	\$ 9,225,064
0601.6001	Communications	Option 1	Hotel Load	7,137,056	-	7,137,056
0601.6002	Special Projects	Option 1	Hotel Load	9,995,270	-	9,995,270
0601.6003	Employee Incentive Program	Option 1	Hotel Load	113	-	113
0601.6004	Project Off-Site Operations	Option 1	Hotel Load	11,006,133	-	11,006,133
0601.6005	Projects Oversight	Option 1	Hotel Load	16,667,313	-	16,667,313

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MFFF 2012 Rebaseline with Addendum Project Cost by Cost Account

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = [A]+[B]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
0601.6009	Relocations	Option 1	Hotel Load	38,306,079	-	38,306,079
0602.6010	Project Controls	Option 1	Hotel Load	42,470,552	-	42,470,552
0602.6011	Risk Management	Option 1	Hotel Load	753,578	-	753,578
0603.6020	QA Program Management & Administration	Option 1	Hotel Load	1,437,299	-	1,437,299
0603.6021	Quality Engineering	Option 1	Hotel Load	2,861,506	-	2,861,506
0603.6022	Audit & Surveillance	Option 1	Hotel Load	1,363,028	-	1,363,028
0603.6023	Quality Control - Labor	Option 1	Hotel Load	2,400,403	-	2,400,403
0603.6024	QA / QC Assembly Group Support	Option 1	Hotel Load	536,953	-	536,953
0603.6025	MOX Potential Back Charges	Option 1	Hotel Load	222,526	-	222,526
0604.6030	PS&A Administrative Support	Option 1	Hotel Load	40,294,967	-	40,294,967
0604.6031	Human Resources	Option 1	Hotel Load	25,211,837	-	25,211,837
0604.6032	Training	Option 1	Hotel Load	20,542,206	-	20,542,206
0604.6033	Information and Personnel Security	Option 1	Hotel Load	18,575,630	-	18,575,630
0604.6034	Record Center	Option 1	Hotel Load	14,391,158	-	14,391,158
0604.6035	Internal Communication	Option 1	Hotel Load	134,969	-	134,969
0604.6036	Accounting, Treasury & Invoice Operations	Option 1	Hotel Load	24,577,396	-	24,577,396
0604.6037	Asset Management	Option 1	Hotel Load	359,715	-	359,715
0604.6038	Facility Management	Option 1	Hotel Load	22,202,181	-	22,202,181
0604.6039	Facility - Mini-MAC Building	Option 1	Hotel Load	123,501	-	123,501
0604.6042	PERC\$	Option 1	Hotel Load	818,632	-	818,632
0604.6045	Gateway Project	Option 1	Hotel Load	738,370	-	738,370
0604.6046	Shaw Nuclear Exchange	Option 1	Hotel Load	-	-	-
0604.6047	Legal Expenses	Option 1	Hotel Load	15,505,975	-	15,505,975
0604.6048	EMC Corporation Matter	Option 1	Hotel Load	1,557	-	1,557
0604.6049	952.204-77 Comp Security	Option 1	Hotel Load	699	-	699
0605.6040	Contract Management & Administration	Option 1	Hotel Load	18,569,434	-	18,569,434
0606.6050	Procurement	Option 1	Hotel Load	8,809,637	-	8,809,637
0606.6051	Infrastructure Procurement	Option 1	Hotel Load	6,141,727	-	6,141,727
0606.6052	Construction Procurement	Option 1	Hotel Load	14,836,392	-	14,836,392
0606.6053	Process Equipment Procurement	Option 1	Hotel Load	16,683,838	-	16,683,838
0606.6054	Process Unit Procurement	Option 1	Hotel Load	464,936	-	464,936
0606.6055	Property Management	Option 1	Hotel Load	5,335,247	-	5,335,247
0606.6056	Employment Eligibility Verifications	Option 1	Hotel Load	851	-	851
0606.6057	Engineered Equipment Group	Option 1	Hotel Load	8,256,992	-	8,256,992
0606.6058	Procurement Corrective Action NRC Commercial Grade Dedication	Option 1	Hotel Load	-	-	-
0606.6059	Procurement Support Services	Option 1	Hotel Load	4,960,099	-	4,960,099
0606.6068	S&R and Warehouses	Option 1	Hotel Load	31,678,298	-	31,678,298
0606.6069	Materials Management	Option 1	Hotel Load	5,942,192	-	5,942,192
0607.6060	IT Support	Option 1	Hotel Load	47,929,477	-	47,929,477
0607.6061	IT Other Direct Costs (ODCs)	Option 1	Hotel Load	57,883,204	-	57,883,204
0607.6062	Team Center Initiative	Option 1	Hotel Load	2,116,187	-	2,116,187
0611.6000	Project Office Operations	Option 1	Hotel Load	833,463	-	833,463
0611.6001	Communications	Option 1	Hotel Load	1,164,936	-	1,164,936
0611.6002	Special Projects	Option 1	Hotel Load	1,270,591	-	1,270,591
0611.6004	Project Off-Site Operations	Option 1	Hotel Load	1,224,027	-	1,224,027
0611.6005	Projects Oversight	Option 1	Hotel Load	1,716,325	-	1,716,325
0611.6009	Relocations	Option 1	Hotel Load	1,138,970	-	1,138,970

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MFFF 2012 Rebaseline with Addendum Project Cost by Cost Account

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = [A]+[B]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
0611.6090	Project Systems Assessment - NNSA (OPC)	Option 1	Hotel Load	239,770	-	239,770
0611.6091	EVMS Process Improvements Development ODC (OPC)	Option 1	Hotel Load	18,475	-	18,475
0612.6010	Project Controls	Option 1	Hotel Load	2,913,451	-	2,913,451
0614.6030	Program Support and Legal Administration	Option 1	Hotel Load	4,555,007	-	4,555,007
0614.6031	Human Resources	Option 1	Hotel Load	493,111	-	493,111
0614.6032	Training	Option 1	Hotel Load	3,519,268	-	3,519,268
0614.6034	Record Center	Option 1	Hotel Load	1,300,316	-	1,300,316
0614.6036	Accounting, Treasury & Invoice Operations	Option 1	Hotel Load	2,876,441	-	2,876,441
0614.6038	Facility Management	Option 1	Hotel Load	1,507,135	-	1,507,135
0614.6047	Legal Expenses	Option 1	Hotel Load	1,665,825	-	1,665,825
0615.6040	Contract Management & Administration	Option 1	Hotel Load	2,043,913	-	2,043,913
0616.6050	Procurement	Option 1	Hotel Load	721,704	-	721,704
0616.6051	Infrastructure Procurement	Option 1	Hotel Load	532,976	-	532,976
0616.6052	Construction Procurement	Option 1	Hotel Load	1,654,810	-	1,654,810
0616.6053	Process Equipment Procurement	Option 1	Hotel Load	290,251	-	290,251
0616.6055	Property Management	Option 1	Hotel Load	1,305,869	-	1,305,869
0616.6057	Engineered Equipment Group	Option 1	Hotel Load	569,012	-	569,012
0616.6059	Procurement Support Services	Option 1	Hotel Load	412,851	-	412,851
0616.6068	S&R and Warehouses	Option 1	Hotel Load	1,319,145	-	1,319,145
0616.6069	Materials Management	Option 1	Hotel Load	510,097	-	510,097
0617.6060	IT Support	Option 1	Hotel Load	6,586,251	-	6,586,251
0617.6061	IT Other Direct Costs (ODCs)	Option 1	Hotel Load	4,239,122	-	4,239,122
1000.8001	Management / Admin	Option 1	Hotel Load	20,831,188	-	20,831,188
1000.8002	Engineering Services Project Controls	Option 1	Hotel Load	9,548,015	-	9,548,015
1000.8003	Engineering Assurance	Option 1	Hotel Load	8,647,662	-	8,647,662
1000.8004	Technical Coordination	Option 1	Hotel Load	6,527,963	-	6,527,963
1000.8005	Document Management	Option 1	Hotel Load	3,991,953	-	3,991,953
1000.8006	Engineering Training	Option 1	Hotel Load	10,484,495	174,341	10,658,836
1001.8011	Business Travel	Option 1	Hotel Load	3,957,791	42,205	3,999,996
1001.8012	Temporary Assignments	Option 1	Hotel Load	10,279,504	221,219	10,500,723
1001.8019	Other ODCs	Option 1	Hotel Load	9,311,446	(1,691,356)	7,620,090
1002.8021	Supervision / Admin	Option 1	Hotel Load	1,349,621	-	1,349,621
1002.8022	Chemical	Option 1	Hotel Load	475,791	-	475,791
1002.8023	Mechanical	Option 1	Hotel Load	13,083	-	13,083
1002.8024	Laboratory	Option 1	Hotel Load	60,629	-	60,629
1002.8025	Balance of Plant (BOP)	Option 1	Hotel Load	37,924	-	37,924
1002.8026	Safety	Option 1	Hotel Load	73,015	-	73,015
1002.8027	Reference Plant Support	Option 1	Hotel Load	105,977	-	105,977
1003.8031	Supervision / Admin	Option 1	Hotel Load	4,537,192	-	4,537,192
1003.8032	Civil / Structural	Option 1	Hotel Load	39,619,718	955,412	40,575,130
1003.8034	Electrical / I&C Site Construction Support	Option 1	Hotel Load	27,874,584	1,308,749	29,183,333
1003.8035	Chemical-Construction Support	Option 1	Hotel Load	18,620,548	7,645	18,628,193
1003.8036	Mechanical – Construction Support	Option 1	Hotel Load	8,381,180	146,388	8,527,568
1003.8037	Plant Configuration Site Construction Support	Option 1	Hotel Load	9,041,717	-	9,041,717
1003.8038	Engineering Mechanics - Site Construction Support	Option 1	Hotel Load	14,380,995	5,949,091	20,330,086
1003.8042	Civil / Structural	Option 1	Hotel Load	-	-	-
1004.8041	Supervision / Admin	Option 1	Hotel Load	1,905,609	-	1,905,609
1004.8042	Civil / Structural	Option 1	Hotel Load	1,474,971	-	1,474,971

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MFFF 2012 Rebaseline with Addendum Project Cost by Cost Account

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = [A]+[B]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
1004.8044	Electrical / I&C Procurement and Fabrication Support	Option 1	Hotel Load	2,558,850	37,044	2,595,894
1004.8046	Chemical-Procurement/Fabrication Support	Option 1	Hotel Load	19,414,143	230,243	19,644,386
1004.8047	Mechanical – Procurement/Fabrication Support	Option 1	Hotel Load	1,304,971	-	1,304,971
1004.8048	Plant Configuration - Construction, Procurement & Fabrication Support	Option 1	Hotel Load	5,747,615	-	5,747,615
1004.8049	Equipment Qualification	Option 1	Hotel Load	9,290,858	98,322	9,389,180
1005.8051	Supervision / Admin	Option 1	Hotel Load	649,247	-	649,247
1005.8052	Mechanical – Startup & Operations Support	Option 1	Hotel Load	189,407	-	189,407
1005.8053	Electrical / IC Startup and Operations Support	Option 1	Hotel Load	3,083,753	29,240	3,112,993
1005.8054	Civil/ Structural Startup Support	Option 1	Hotel Load	-	-	-
1005.8055	Engineering Mechanics Startup Support	Option 1	Hotel Load	-	-	-
1005.8057	Chemical/Mechanical Engineering Startup Support	Option 1	Hotel Load	548,121	-	548,121
1005.8058	Software Modifications	Option 1	Hotel Load	9,113	-	9,113
1005.8059	Plant Configuration	Option 1	Hotel Load	-	-	-
1006.8001	Management / Admin ODC	Option 1	Hotel Load	1,407,038	-	1,407,038
1006.8002	Project Controls OPC	Option 1	Hotel Load	262,767	-	262,767
1006.8003	Engineering Assurance ODC	Option 1	Hotel Load	446,932	-	446,932
1006.8005	Document Management	Option 1	Hotel Load	169,402	-	169,402
1006.8006	Engineering Training	Option 1	Hotel Load	131,226	-	131,226
1006.8011	Business Travel	Option 1	Hotel Load	5,563	-	5,563
1006.8049	Engineering Mechanics	Option 1	Hotel Load	925,155	-	925,155
1006.8052	Process Unit Responsible Engineer Startup Support	Option 1	Hotel Load	3,919,092	30,597	3,949,689
1006.8053	Electrical / IC Startup Support	Option 1	Hotel Load	3,540,890	-	3,540,890
1006.8054	Civil/ Structural Startup Support	Option 1	Hotel Load	1,226,667	-	1,226,667
1006.8055	Engineering Mechanics Startup Support	Option 1	Hotel Load	1,721,000	-	1,721,000
1006.8057	Chemical/ Mechanical Engineering Startup Support	Option 1	Hotel Load	5,571,346	-	5,571,346
1006.8059	Plant Configuration	Option 1	Hotel Load	1,136,403	-	1,136,403
1100.8101	Management / Administration	Option 1	Hotel Load	2,227,893	-	2,227,893
1100.8102	NSA Project Controls	Option 1	Hotel Load	1,491,371	-	1,491,371
1101.8111	Business Travel	Option 1	Hotel Load	504,806	-	504,806
1101.8112	Temporary Assignments	Option 1	Hotel Load	55,790	-	55,790
1101.8119	Other ODCs (Legal & S/C Costs)	Option 1	Hotel Load	1,622,276	-	1,622,276
1102.8121	Defense of Licensing Basis	Option 1	Hotel Load	11,460,643	-	11,460,643
1102.8122	Compliance Program	Option 1	Hotel Load	2,054,829	-	2,054,829
1102.8123	Condition Reports Work Resolution	Option 1	Hotel Load	205,042	-	205,042
1103.8132	Chemical Safety Support	Option 1	Hotel Load	4,012,744	-	4,012,744
1103.8133	Laboratory Support	Option 1	Hotel Load	210,173	-	210,173
1104.8141	ES&H Program	Option 1	Hotel Load	1,229,596	-	1,229,596
1104.8142	Radiological Protection	Option 1	Hotel Load	5,869	-	5,869
1104.8143	Environmental Protection Program	Option 1	Hotel Load	823,040	-	823,040
1104.8144	Industrial Safety Program	Option 1	Hotel Load	638,299	-	638,299
1104.8145	Waste Management Program	Option 1	Hotel Load	334,145	-	334,145
1104.8146	Fitness for Duty Program	Option 1	Hotel Load	515,082	-	515,082
1104.8147	Emergency Response Program	Option 1	Hotel Load	94,698	-	94,698
1104.8148	Employee Safety Incentive Program	Option 1	Hotel Load	79,977	-	79,977
1104.8149	Construction - Safety Engineering Support	Option 1	Hotel Load	459,000	-	459,000
1105.8151	Criticality Safety Procurement & Const Support	Option 1	Hotel Load	4,035,676	-	4,035,676
1105.8154	Nuclear Radiation Protections	Option 1	Hotel Load	2,291,377	-	2,291,377
1105.8155	Nuclear Radiation & Criticality Monitoring	Option 1	Hotel Load	1,793	-	1,793

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MFFF 2012 Rebaseline with Addendum Project Cost by Cost Account

Cost Account	Cost Account Description	Contract	Claim Category	[A] [B] [C] = [A]+[B]		
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
1106.8161	Defense of the Safety Basis	Option 1	Hotel Load	4,087,071	-	4,087,071
1109.8191	NRC Costs	Option 1	Hotel Load	57,777,922	-	57,777,922
1109.8192	Physical Security Program	Option 1	Hotel Load	12,193,107	-	12,193,107
1109.8193	Material Control & Accountability Program	Option 1	Hotel Load	13,452,777	-	13,452,777
1110.8101	Management / Administration	Option 1	Hotel Load	226,869	-	226,869
1110.8102	Project Controls	Option 1	Hotel Load	102,632	-	102,632
1112.8121	Defense of Licensing Basis	Option 1	Hotel Load	1,524,420	-	1,524,420
1113.8132	Chemical Safety Support	Option 1	Hotel Load	567,575	-	567,575
1115.8151	Criticality Safety Procurement & Const Support	Option 1	Hotel Load	951,357	-	951,357
1115.8154	Nuclear Radiation Protections	Option 1	Hotel Load	329,182	-	329,182
1116.8161	Defense of the Safety Basis	Option 1	Hotel Load	493,859	-	493,859
1802.8820	Supplies & Services	Option 1	Hotel Load	355,064	1,812,630	2,167,694
1802.8821	Office Equipment, Furniture Leases & Purchases	Option 1	Hotel Load	4,278,754	-	4,278,754
1803.8830	Temporary Site Features & Services	Option 1	Hotel Load	518,980	-	518,980
1803.8832	Buildings Shops / Trailers	Option 1	Hotel Load	22,521,397	-	22,521,397
1803.8833	Utilities & Services	Option 1	Hotel Load	45,585,905	-	45,585,905
1803.8850	Misc Field Construction Supplies	Option 1	Hotel Load	-	-	-
1804.8840	Equipment	Option 1	Hotel Load	43,706,780	-	43,706,780
1804.8842	Construction Materials Management	Option 1	Hotel Load	5,794,327	-	5,794,327
1804.8843	Tools	Option 1	Hotel Load	754,407	-	754,407
1804.8850	Temporary Site Features & Services	Option 1	Hotel Load	-	-	-
1805.8850	Miscellaneous Field Supplies & Services	Option 1	Hotel Load	72,941,704	-	72,941,704
1805.8851	Foreign National Escorts	Option 1	Hotel Load	-	-	-
2000.9001	Management / Administration	Option 1	Hotel Load	12,719,516	-	12,719,516
2000.9002	Project Controls	Option 1	Hotel Load	1,844,714	-	1,844,714
2001.9014	Test Equipment & Consumables	Option 1	Hotel Load	1,910,308	-	1,910,308
2002.9021	Generic Test Documents	Option 1	Hotel Load	143,702	-	143,702
2002.9024	Technical Support	Option 1	Hotel Load	139,892	-	139,892
2002.9026	Cold Startup Training	Option 1	Hotel Load	1,211,069	-	1,211,069
2004.9047	Turnover & Logistics	Option 1	Hotel Load	2,852,716	-	2,852,716
2006.9060	Maintenance Program, Layup/In-Storage	Option 1	Hotel Load	4,473,849	-	4,473,849
2010.9101	Management / Administration - IPT	Option 1	Hotel Load	31,409,273	-	31,409,273
2010.9102	Project Controls - IPT	Option 1	Hotel Load	4,389,193	-	4,389,193
2010.9103	Program Support for Start-up	Option 1	Hotel Load	3,425,955	-	3,425,955
2011.9117	Spare Parts - IPT	Option 1	Hotel Load	3,630,728	-	3,630,728
2012.9124	Technical Support - IPT	Option 1	Hotel Load	2,130,381	-	2,130,381
2012.9126	Cold Startup Training - IPT	Option 1	Hotel Load	6,130,662	-	6,130,662
2100.9501	Management / Administration	Option 1	Hotel Load	22,482,010	-	22,482,010
2100.9502	Project Controls	Option 1	Hotel Load	4,341,736	-	4,341,736
2100.9503	Quality Assurance	Option 1	Hotel Load	-	-	-
2100.9504	Environment, Safety & Health	Option 1	Hotel Load	-	-	-
2100.9506	PS&A	Option 1	Hotel Load	-	-	-
2101.9511	Business Travel	Option 1	Hotel Load	2,028,587	-	2,028,587
2101.9512	Temporary Assignments	Option 1	Hotel Load	6,462,252	-	6,462,252
2101.9515	Consumables	Option 1	Hotel Load	2,438,200	-	2,438,200
2101.9518	Software	Option 1	Hotel Load	3,954,314	-	3,954,314
2102.9522	Training at Richland	Option 1	Hotel Load	1,182,981	-	1,182,981

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MFFF 2012 Rebaseline with Addendum Project Cost by Cost Account

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = [A]+[B]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
2102.9523	Training at LaHague	Option 1	Hotel Load	3,675,088	-	3,675,088
2102.9524	Training at Melox	Option 1	Hotel Load	5,648,433	-	5,648,433
2102.9525	Other Training	Option 1	Hotel Load	85,723	-	85,723
2102.9526	Operations Activities	Option 1	Hotel Load	157,198	-	157,198
2102.9527	Operations Process Simulator	Option 1	Hotel Load	1,584,317	-	1,584,317
2102.9528	Reference Plant Training Direct Costs	Option 1	Hotel Load	108,059,327	-	108,059,327
2103.9531	Organizational Documents	Option 1	Hotel Load	4,215,983	-	4,215,983
2103.9532	Laboratory Procedures	Option 1	Hotel Load	2,677,948	-	2,677,948
2103.9533	Maintenance Procedures	Option 1	Hotel Load	4,593,634	-	4,593,634
2103.9534	Operating Procedures	Option 1	Hotel Load	8,148,158	-	8,148,158
2103.9535	Hot Startup Planning	Option 1	Hotel Load	1,121,733	-	1,121,733
2103.9536	Turnover to Operations	Option 1	Hotel Load	-	-	-
2103.9537	Support to Other groups	Option 1	Hotel Load	7,136,528	-	7,136,528
2104.9541	Early Option 2 Proposal Development (Labor)	Option 1	Hotel Load	672,700	-	672,700
2105.9550	Aqueous Polishing Activities	Option 1	Hotel Load	3,216,088	-	3,216,088
2105.9551	Powder Pellet Activities	Option 1	Hotel Load	6,619,357	-	6,619,357
2105.9552	Rod Bundle Activities	Option 1	Hotel Load	2,473,008	-	2,473,008
2105.9553	Balance of Plant Activities	Option 1	Hotel Load	6,595,420	-	6,595,420
2105.9554	Laboratory Activities	Option 1	Hotel Load	14,901,345	-	14,901,345
2105.9555	Maintenance Activities	Option 1	Hotel Load	31,130,877	-	31,130,877
2105.9556	Logistics / Warehousing	Option 1	Hotel Load	2,675,586	-	2,675,586
2105.9557	System Engineering Activities	Option 1	Hotel Load	12,540,813	-	12,540,813
2201.8138	Relocation	Option 1	Hotel Load	20,912	-	20,912
2201.8141	ES&H Program	Option 1	Hotel Load	8,149,431	-	8,149,431
2201.8143	Environmental Protection Program	Option 1	Hotel Load	5,433,744	-	5,433,744
2201.8144	Industrial Safety Program	Option 1	Hotel Load	930,909	-	930,909
2201.8145	Waste Management Program	Option 1	Hotel Load	3,318,918	-	3,318,918
2201.8146	Fitness for Duty Program	Option 1	Hotel Load	1,379,366	-	1,379,366
2201.8147	Emergency Preparedness Program	Option 1	Hotel Load	1,640,343	-	1,640,343
2201.8148	Employee Safety Incentive Program	Option 1	Hotel Load	1,053,890	-	1,053,890
2201.8149	ES & H Safety Engineer	Option 1	Hotel Load	11,290,726	-	11,290,726
2201.8150	Field Office Supplies	Option 1	Hotel Load	5,499	-	5,499
2201.8820	Field Office Supplies	Option 1	Hotel Load	90,217	-	90,217
2202.8141	ES&H Program	Option 1	Hotel Load	1,232,710	-	1,232,710
2202.8143	Environmental Protection Program	Option 1	Hotel Load	949,660	-	949,660
2202.8145	Waste Management Program	Option 1	Hotel Load	693,898	-	693,898
2202.8147	Emergency Response Program	Option 1	Hotel Load	599,081	-	599,081
2202.8148	Employee Safety Incentive Program	Option 1	Hotel Load	177,741	-	177,741
2202.8149	ES & H Safety Engineer	Option 1	Hotel Load	2,101,834	-	2,101,834
2202.9504	Radiological Protection Early Start Up	Option 1	Hotel Load	15,591,116	-	15,591,116
Process Units - Hotel Load Subtotal				\$ 1,603,294,920	\$ 9,351,770	\$ 1,612,646,690
1000.8037	Mechanical – Construction Support	Option 1	MFFF Construction - Title III Engineering		\$ -	\$ -
1003.8032	Civil / Structural	Option 1	MFFF Construction - Title III Engineering	20,991,585	318,356	21,309,941
1003.8034	Electrical / I&C Site Construction Support	Option 1	MFFF Construction - Title III Engineering	26,236,366	-	26,236,366
1003.8035	Chemical-Construction Support	Option 1	MFFF Construction - Title III Engineering	7,654,227	-	7,654,227
1003.8036	Mechanical – Construction Support	Option 1	MFFF Construction - Title III Engineering	5,993,434	-	5,993,434
1003.8037	Plant Configuration Site Construction Support	Option 1	MFFF Construction - Title III Engineering	24,406,806	-	24,406,806

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MFFF 2012 Rebaseline with Addendum Project Cost by Cost Account

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = [A]+[B]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
1003.8038	Engineering Mechanics - Site Construction Support	Option 1	MFFF Construction - Title III Engineering	1,889,064	-	1,889,064
1004.8040	Responsible Engineer Process Unit Fabrication Support	Option 1	MFFF Construction - Title III Engineering	0	-	-
1004.8044	Electrical / I&C Procurement and Fabrication Support	Option 1	MFFF Construction - Title III Engineering	2,589	-	2,589
1004.8046	Chemical-Procurement/Fabrication Support	Option 1	MFFF Construction - Title III Engineering	3,032,980	-	3,032,980
1004.8047	Mechanical – Procurement/Fabrication Support	Option 1	MFFF Construction - Title III Engineering	319,072	-	319,072
1005.8052	Mechanical – Startup & Operations Support	Option 1	MFFF Construction - Title III Engineering	300,099	-	300,099
1005.8053	Electrical / IC Startup and Operations Support	Option 1	MFFF Construction - Title III Engineering	-	-	-
1005.8054	Civil/ Structural Startup Support	Option 1	MFFF Construction - Title III Engineering	-	-	-
1005.8057	Chemical/Mechanical Engineering Startup Support	Option 1	MFFF Construction - Title III Engineering	120,575	-	120,575
1007.8071	Chemical Related Engineered Equipment	Option 1	MFFF Construction - Title III Engineering	-	-	-
1007.8072	Electrical Related Engineered Equipment	Option 1	MFFF Construction - Title III Engineering	-	-	-
1007.8073	Instrumentation & Control Related Engineered Equipment	Option 1	MFFF Construction - Title III Engineering	-	-	-
1007.8074	HVAC Related Engineered Equipment	Option 1	MFFF Construction - Title III Engineering	-	-	-
1007.8075	Miscellaneous Engineered Equipment	Option 1	MFFF Construction - Title III Engineering	-	-	-
MFFF Construction - Title III Engineering Subtotal				\$ 90,946,795	\$ 318,356	\$ 91,265,151
1721.2101	Site Preparation	Option 1	MFFF Construction - Installation/Materials	\$ 29,492,485	\$ -	\$ 29,492,485
1722.2201	Roads & Parking	Option 1	MFFF Construction - Installation/Materials	1,770,466	-	1,770,466
1722.2202	F" Road"	Option 1	MFFF Construction - Installation/Materials	3,767,924	-	3,767,924
1723.2301	Yard Structures	Option 1	MFFF Construction - Installation/Materials	3,861,339	-	3,861,339
1723.2501		Option 1	MFFF Construction - Installation/Materials	-	-	-
1724.2401	Underground Utilities	Option 1	MFFF Construction - Installation/Materials	21,315,647	-	21,315,647
1725.2501	Yard Fire Protection	Option 1	MFFF Construction - Installation/Materials	3,091,847	-	3,091,847
1726.2601	Chillers	Option 1	MFFF Construction - Installation/Materials	6,597,688	-	6,597,688
1727.2701	Site Security and Perimeter Intrusion Detection and Assessment Syste	Option 1	MFFF Construction - Installation/Materials	46,557,859	-	46,557,859
1728.2801	Yard Electrical & Lighting	Option 1	MFFF Construction - Installation/Materials	5,075,140	1,001,856	6,076,996
1729.2901	Landscaping	Option 1	MFFF Construction - Installation/Materials	334,321	-	334,321
1731.3150	Administration Building	Option 1	MFFF Construction - Installation/Materials	11,047,671	-	11,047,671
1732.3250	Receiving Warehouse Building	Option 1	MFFF Construction - Installation/Materials	1,257,230	-	1,257,230
1732.3550	Standby Diesel Generator Building	Option 1	MFFF Construction - Installation/Materials	-	-	-
1733.3350	Secured Warehouse Building	Option 1	MFFF Construction - Installation/Materials	4,429,712	-	4,429,712
1734.3450	Tech Support & Access Control Building	Option 1	MFFF Construction - Installation/Materials	20,551,164	-	20,551,164
1735.3550	Standby Diesel Generator Building	Option 1	MFFF Construction - Installation/Materials	-	-	-
1735.3556	Standby Diesel Generator System/Equip.	Option 1	MFFF Construction - Installation/Materials	-	-	-
1736.3652	Civil / Structural / Architectural	Option 1	MFFF Construction - Installation/Materials	12,694,518	-	12,694,518
1736.3653	Mechanical / Piping	Option 1	MFFF Construction - Installation/Materials	5,079,259	602,200	5,681,459
1736.3654	Electrical	Option 1	MFFF Construction - Installation/Materials	12,245,457	-	12,245,457
1736.3655	I&C	Option 1	MFFF Construction - Installation/Materials	672,465	-	672,465
1736.3656	Emerg.Diesel Gen.System/Equipment	Option 1	MFFF Construction - Installation/Materials	10,397,689	270,645	10,668,334
1737.3751	Design	Option 1	MFFF Construction - Installation/Materials	3,061,059	-	3,061,059
1737.3752	Civil / Structural / Architectural	Option 1	MFFF Construction - Installation/Materials	2,335,417	-	2,335,417
1737.3753	Mechanical / Piping	Option 1	MFFF Construction - Installation/Materials	2,427,612	150,046	2,577,658
1737.3754	Electrical	Option 1	MFFF Construction - Installation/Materials	916,676	-	916,676
1737.3755	I&C	Option 1	MFFF Construction - Installation/Materials	58,855	-	58,855
1737.3756	Reagent Systems Equipment / Piping	Option 1	MFFF Construction - Installation/Materials	9,741,737	-	9,741,737
1741.4100	Building Structure	Option 1	MFFF Construction - Installation/Materials	48,980,823	-	48,980,823
1741.4110	Architectural Features	Option 1	MFFF Construction - Installation/Materials	12,573,673	-	12,573,673
1741.4120	HVAC	Option 1	MFFF Construction - Installation/Materials	25,031,783	11,344,628	36,376,411

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MFFF 2012 Rebaseline with Addendum Project Cost by Cost Account

Cost Account	Cost Account Description	Contract	Claim Category	[C] = [A]+[B]		
				[A]	[B]	[C]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
1741.4130	MOX Processing Area (BMP) – MOX Processing Area – Level 1 – Fire Pro	Option 1	MFFF Construction - Installation/Materials	12,838,509	(139,560)	12,698,949
1741.4140	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	2,083,905	-	2,083,905
1741.4150	Process Piping	Option 1	MFFF Construction - Installation/Materials	17,941,478	-	17,941,478
1741.4170	Other Equipment	Option 1	MFFF Construction - Installation/Materials	6,319,621	775,159	7,094,780
1741.4180	Electrical	Option 1	MFFF Construction - Installation/Materials	39,253,457	7,957,015	47,210,472
1741.4190	Instrumentation	Option 1	MFFF Construction - Installation/Materials	2,263,956	470,592	2,734,549
1742.4200	Building Structure	Option 1	MFFF Construction - Installation/Materials	35,620,852	-	35,620,852
1742.4210	Architectural Features	Option 1	MFFF Construction - Installation/Materials	4,607,399	-	4,607,399
1742.4220	HVAC	Option 1	MFFF Construction - Installation/Materials	20,337,674	633,593	20,971,266
1742.4230	MOX Processing Area (BMP) – MOX Processing Area – Level 2 – Fire Pro	Option 1	MFFF Construction - Installation/Materials	14,509,257	87,277	14,596,534
1742.4240	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	42,641	-	42,641
1742.4250	Process Piping	Option 1	MFFF Construction - Installation/Materials	11,361,603	-	11,361,603
1742.4270	Other Equipment	Option 1	MFFF Construction - Installation/Materials	2,570,349	-	2,570,349
1742.4280	Electrical	Option 1	MFFF Construction - Installation/Materials	24,245,651	5,113,742	29,359,393
1742.4290	Instrumentation	Option 1	MFFF Construction - Installation/Materials	1,672,667	56,180	1,728,847
1742.4600	Fuel Assembly / Rods	Option 1	MFFF Construction - Installation/Materials	-	-	-
1743.4300	Building Structure	Option 1	MFFF Construction - Installation/Materials	28,748,394	-	28,748,394
1743.4310	Architectural Features	Option 1	MFFF Construction - Installation/Materials	5,178,527	-	5,178,527
1743.4320	HVAC	Option 1	MFFF Construction - Installation/Materials	33,868,139	2,375,012	36,243,152
1743.4330	MOX Processing Area (BMP) – MOX Processing Area – Level 3 – Fire Pro	Option 1	MFFF Construction - Installation/Materials	9,174,917	417,575	9,592,492
1743.4340	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	104,868	-	104,868
1743.4350	Process Piping	Option 1	MFFF Construction - Installation/Materials	14,276,183	-	14,276,183
1743.4370	Other Equipment	Option 1	MFFF Construction - Installation/Materials	1,178,593	-	1,178,593
1743.4380	Electrical	Option 1	MFFF Construction - Installation/Materials	29,108,526	4,472,321	33,580,847
1743.4390	Instrumentation	Option 1	MFFF Construction - Installation/Materials	13,578,892	6,099,305	19,678,197
1744.4400	Building Structure	Option 1	MFFF Construction - Installation/Materials	12,198,268	-	12,198,268
1744.4410	Architectural Features	Option 1	MFFF Construction - Installation/Materials	-	-	-
1744.4420	HVAC	Option 1	MFFF Construction - Installation/Materials	759,226	2,123,172	2,882,398
1744.4430	MOX Processing Area (BMP) – MOX Processing Area – Level 4 – Fire Pr	Option 1	MFFF Construction - Installation/Materials	83,530	-	83,530
1744.4440	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	610,698	-	610,698
1744.4480	Electrical	Option 1	MFFF Construction - Installation/Materials	946,936	-	946,936
1744.4490	Instrumentation	Option 1	MFFF Construction - Installation/Materials	52,684	-	52,684
1746.4600	Fuel Assembly / Rods	Option 1	MFFF Construction - Installation/Materials	4,513,528	-	4,513,528
1746.4610	Powder & Pellets	Option 1	MFFF Construction - Installation/Materials	13,852,934	-	13,852,934
1746.4620	Furnaces & Pellet Storage	Option 1	MFFF Construction - Installation/Materials	3,217,081	-	3,217,081
1746.4630	PuO2 Receiving, Storage & Decanning	Option 1	MFFF Construction - Installation/Materials	1,593,800	-	1,593,800
1746.4640	Labs & Testing	Option 1	MFFF Construction - Installation/Materials	35,673,183	-	35,673,183
1751.5100	Building Structure	Option 1	MFFF Construction - Installation/Materials	21,310,875	-	21,310,875
1751.5110	Architectural Features	Option 1	MFFF Construction - Installation/Materials	7,294,497	-	7,294,497
1751.5120	HVAC	Option 1	MFFF Construction - Installation/Materials	5,522,402	3,194,256	8,716,658
1751.5130	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 1 –	Option 1	MFFF Construction - Installation/Materials	1,687,871	113,711	1,801,582
1751.5140	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	1,928,426	5,000	1,933,426
1751.5150	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	61,479,927	1,793,787	63,273,713
1751.5170	Other Equipment	Option 1	MFFF Construction - Installation/Materials	1,833,068	173,825	2,006,893
1751.5180	Electrical	Option 1	MFFF Construction - Installation/Materials	14,788,145	2,413,665	17,201,810
1751.5190	Instrumentation	Option 1	MFFF Construction - Installation/Materials	776,284	-	776,284
1751.5250		Option 1	MFFF Construction - Installation/Materials	-	-	-
1751.5700		Option 1	MFFF Construction - Installation/Materials	-	-	-

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MFFF 2012 Rebaseline with Addendum Project Cost by Cost Account

Cost Account	Cost Account Description	Contract	Claim Category	[C] = [A]+[B]		
				[A]	[B]	[C] = [A]+[B]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
1752.5200	Building Structure	Option 1	MFFF Construction - Installation/Materials	9,451,743	-	9,451,743
1752.5210	Architectural Features	Option 1	MFFF Construction - Installation/Materials	1,248,731	-	1,248,731
1752.5220	HVAC	Option 1	MFFF Construction - Installation/Materials	4,456,334	1,359,260	5,815,594
1752.5230	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 2 –	Option 1	MFFF Construction - Installation/Materials	1,448,562	32,491	1,481,053
1752.5240	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	668,407	-	668,407
1752.5250	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	99,621,681	3,765,933	103,387,615
1752.5270	Other Equipment	Option 1	MFFF Construction - Installation/Materials	451,468	-	451,468
1752.5280	Electrical	Option 1	MFFF Construction - Installation/Materials	12,371,164	1,869,083	14,240,247
1752.5290	Instrumentation	Option 1	MFFF Construction - Installation/Materials	923,769	56,180	979,949
1753.5300	Building Structure	Option 1	MFFF Construction - Installation/Materials	18,004,541	-	18,004,541
1753.5310	Architectural Features	Option 1	MFFF Construction - Installation/Materials	1,752,632	-	1,752,632
1753.5320	HVAC	Option 1	MFFF Construction - Installation/Materials	3,838,597	1,168,362	5,006,959
1753.5330	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 3 –	Option 1	MFFF Construction - Installation/Materials	1,739,718	110,733	1,850,451
1753.5340	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	240,601	-	240,601
1753.5350	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	14,785,971	342,275	15,128,246
1753.5370	Other Equipment	Option 1	MFFF Construction - Installation/Materials	729,933	-	729,933
1753.5380	Electrical	Option 1	MFFF Construction - Installation/Materials	13,771,405	2,622,067	16,393,472
1753.5390	Instrumentation	Option 1	MFFF Construction - Installation/Materials	1,333,837	56,180	1,390,017
1754.5400	Building Structure	Option 1	MFFF Construction - Installation/Materials	5,868,741	-	5,868,741
1754.5410	Architectural Features	Option 1	MFFF Construction - Installation/Materials	1,700,960	-	1,700,960
1754.5420	HVAC	Option 1	MFFF Construction - Installation/Materials	3,879,528	590,359	4,469,887
1754.5430	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 4 –	Option 1	MFFF Construction - Installation/Materials	2,011,049	132,878	2,143,927
1754.5440	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	1,118,479	245,523	1,364,002
1754.5450	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	15,726,421	174,744	15,901,164
1754.5470	Other Equipment	Option 1	MFFF Construction - Installation/Materials	503,476	-	503,476
1754.5480	Electrical	Option 1	MFFF Construction - Installation/Materials	14,137,204	2,078,460	16,215,664
1754.5490	Instrumentation	Option 1	MFFF Construction - Installation/Materials	814,419	-	814,419
1754.5540	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	-	-	-
1755.5500	Building Structure	Option 1	MFFF Construction - Installation/Materials	10,560,583	-	10,560,583
1755.5510	Architectural Features	Option 1	MFFF Construction - Installation/Materials	2,112,694	-	2,112,694
1755.5520	HVAC	Option 1	MFFF Construction - Installation/Materials	6,266,659	3,172,482	9,439,141
1755.5530	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 5 –	Option 1	MFFF Construction - Installation/Materials	1,232,949	157,060	1,390,009
1755.5540	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	1,990,878	51,150	2,042,028
1755.5550	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	9,410,822	252,872	9,663,694
1755.5570	Other Equipment	Option 1	MFFF Construction - Installation/Materials	213,102	-	213,102
1755.5580	Electrical	Option 1	MFFF Construction - Installation/Materials	12,921,965	439,431	13,361,396
1755.5590	Instrumentation	Option 1	MFFF Construction - Installation/Materials	9,345,235	6,092,808	15,438,044
1756.5600	Building Structure	Option 1	MFFF Construction - Installation/Materials	5,340,300	-	5,340,300
1756.5670	Other Equipment	Option 1	MFFF Construction - Installation/Materials	-	-	-
1756.5680	Electrical	Option 1	MFFF Construction - Installation/Materials	187,169	-	187,169
1756.5690	Instrumentation	Option 1	MFFF Construction - Installation/Materials	10,436	-	10,436
1757.5730	PAF	Option 1	MFFF Construction - Installation/Materials	35,808	-	35,808
1758.5810	Mechanical Systems	Option 1	MFFF Construction - Installation/Materials	11,156,856	-	11,156,856
1758.5850	Chemical Systems	Option 1	MFFF Construction - Installation/Materials	7,082,040	-	7,082,040
1761.6100	Building Structure	Option 1	MFFF Construction - Installation/Materials	21,483,846	-	21,483,846
1761.6110	Architectural Features	Option 1	MFFF Construction - Installation/Materials	4,960,379	-	4,960,379
1761.6120	HVAC	Option 1	MFFF Construction - Installation/Materials	4,498,783	(134,161)	4,364,621
1761.6130	Shipping and Receiving Area (BSR) – Shipping and Receiving Area – Le	Option 1	MFFF Construction - Installation/Materials	1,325,576	117,757	1,443,333

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MFFF 2012 Rebaseline with Addendum Project Cost by Cost Account

Cost Account	Cost Account Description	Contract	Claim Category	[C] = [A]+[B]		
				[A]	[B]	[C] = [A]+[B]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
1761.6140	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	948,598	-	948,598
1761.6150	Process Piping	Option 1	MFFF Construction - Installation/Materials	1,199,682	-	1,199,682
1761.6170	Other Equipment	Option 1	MFFF Construction - Installation/Materials	312,752	45,698	358,450
1761.6180	Electrical	Option 1	MFFF Construction - Installation/Materials	8,043,706	1,032,629	9,076,335
1761.6190	Instrumentation	Option 1	MFFF Construction - Installation/Materials	659,455	434,053	1,093,509
1762.6200	Building Structure	Option 1	MFFF Construction - Installation/Materials	11,030,640	-	11,030,640
1762.6210	Architectural Features	Option 1	MFFF Construction - Installation/Materials	808,993	-	808,993
1762.6220	HVAC	Option 1	MFFF Construction - Installation/Materials	8,200,057	(324,143)	7,875,915
1762.6230	Shipping and Receiving Area (BSR) – Shipping and Receiving Area – Le	Option 1	MFFF Construction - Installation/Materials	1,082,082	366,313	1,448,395
1762.6240	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	20,100	-	20,100
1762.6250	Process Piping	Option 1	MFFF Construction - Installation/Materials	311,367	-	311,367
1762.6270	Other Equipment	Option 1	MFFF Construction - Installation/Materials	34,875	-	34,875
1762.6280	Electrical	Option 1	MFFF Construction - Installation/Materials	4,865,978	470,823	5,336,801
1762.6290	Instrumentation	Option 1	MFFF Construction - Installation/Materials	334,483	-	334,483
1763.6300	Building Structure	Option 1	MFFF Construction - Installation/Materials	5,600,636	-	5,600,636
1763.6310	Architectural Features	Option 1	MFFF Construction - Installation/Materials	1,669,516	-	1,669,516
1763.6320	HVAC	Option 1	MFFF Construction - Installation/Materials	6,681,357	886,643	7,568,000
1763.6330	Shipping and Receiving Area (BSR) – Shipping and Receiving Area – Le	Option 1	MFFF Construction - Installation/Materials	1,476,182	183,030	1,659,212
1763.6340	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	58,334	-	58,334
1763.6350	Process Piping	Option 1	MFFF Construction - Installation/Materials	863,815	-	863,815
1763.6370	Other Equipment	Option 1	MFFF Construction - Installation/Materials	105,520	-	105,520
1763.6380	Electrical	Option 1	MFFF Construction - Installation/Materials	8,353,116	377,760	8,730,876
1763.6390	Instrumentation	Option 1	MFFF Construction - Installation/Materials	1,401,368	377,873	1,779,241
1764.6400	Building Structure	Option 1	MFFF Construction - Installation/Materials	3,072,441	-	3,072,441
1764.6470	Other Equipment	Option 1	MFFF Construction - Installation/Materials	-	-	-
1764.6480	Electrical	Option 1	MFFF Construction - Installation/Materials	186,341	-	186,341
1764.6490	Instrumentation	Option 1	MFFF Construction - Installation/Materials	10,457	-	10,457
1771.7100	Building Structure	Option 1	MFFF Construction - Installation/Materials	8,425,791	-	8,425,791
1771.7110	Architectural Features	Option 1	MFFF Construction - Installation/Materials	1,420,056	-	1,420,056
1771.7120	HVAC	Option 1	MFFF Construction - Installation/Materials	4,046,041	313,711	4,359,752
1771.7130	Fire Protection	Option 1	MFFF Construction - Installation/Materials	-	-	-
1771.7140	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	35,057	-	35,057
1771.7170	Other Equipment	Option 1	MFFF Construction - Installation/Materials	-	-	-
1771.7180	Electrical	Option 1	MFFF Construction - Installation/Materials	1,542,408	139,719	1,682,127
1771.7190	Instrumentation	Option 1	MFFF Construction - Installation/Materials	86,625	-	86,625
1772.7200	Building Structure	Option 1	MFFF Construction - Installation/Materials	39,222,116	-	39,222,116
1772.7210	Architectural Features	Option 1	MFFF Construction - Installation/Materials	31,026,898	-	31,026,898
1772.7270	Other Equipment	Option 1	MFFF Construction - Installation/Materials	113,238	-	113,238
1772.7280	Electrical	Option 1	MFFF Construction - Installation/Materials	1,091,331	-	1,091,331
1774.7401	Subcontractor Project Management/Project Controls	Option 1	MFFF Construction - Installation/Materials	72,846,805	-	72,846,805
1774.7402	Subcontractor Project Administration/Accounting	Option 1	MFFF Construction - Installation/Materials	-	-	-
1774.7403	Subcontractor Quality Assurance / Quality Control	Option 1	MFFF Construction - Installation/Materials	-	-	-
1774.7404	Subcontractor Environmental, Safety and Health	Option 1	MFFF Construction - Installation/Materials	3	-	3
1774.7405	Subcontractor Home Office Support	Option 1	MFFF Construction - Installation/Materials	-	-	-
1774.7406	Subcontractor Mobilization	Option 1	MFFF Construction - Installation/Materials	859,829	-	859,829
1774.7407	Subcontractor Demobilization	Option 1	MFFF Construction - Installation/Materials	580,131	-	580,131
1774.7408	Dewatering, Erosion and Sedimentation Control	Option 1	MFFF Construction - Installation/Materials	176,470	-	176,470
1774.7409	Equipment Rental (Including Vehicles)	Option 1	MFFF Construction - Installation/Materials	20,944,738	-	20,944,738

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MFFF 2012 Rebaseline with Addendum Project Cost by Cost Account

Cost Account	Cost Account Description	Contract	Claim Category	[C] = [A]+[B]		
				[A]	[B]	[C]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
1774.7410	Miscellaneous Procured Services	Option 1	MFFF Construction - Installation/Materials	1,447,138	-	1,447,138
1774.7411	Consumables and Expendable Materials	Option 1	MFFF Construction - Installation/Materials	4,263,877	-	4,263,877
1774.7412	Performance Bond	Option 1	MFFF Construction - Installation/Materials	1,107,034	-	1,107,034
1774.7413	Tools	Option 1	MFFF Construction - Installation/Materials	387,367	-	387,367
1774.7414	Craft Distributable and Indirect Costs	Option 1	MFFF Construction - Installation/Materials	14,124,171	-	14,124,171
1774.7415	Concrete Batch Plant	Option 1	MFFF Construction - Installation/Materials	3,778,185	-	3,778,185
1774.7416	Independent Test Lab	Option 1	MFFF Construction - Installation/Materials	1,887,424	-	1,887,424
1774.7417	NDE Testing	Option 1	MFFF Construction - Installation/Materials	904,226	-	904,226
1774.7418	Craft Support for MFFF Construction	Option 1	MFFF Construction - Installation/Materials	23,870,675	-	23,870,675
1774.7419	Construction Distributables - Misc	Option 1	MFFF Construction - Installation/Materials	44,517,380	-	44,517,380
1774.7420	Bulk Cable for MFFF Construction	Option 1	MFFF Construction - Installation/Materials	33,574,419	2,935,805	36,510,224
1774.7421	Electrical Connectors for MFFF Construction	Option 1	MFFF Construction - Installation/Materials	-	-	-
1774.7422	Electric Glove Box Penetrations for MFFF Construction	Option 1	MFFF Construction - Installation/Materials	-	-	-
1774.7424	Distributables - Bulk Commodity - HVAC	Option 1	MFFF Construction - Installation/Materials	17,899,674	(354,319)	17,545,355
1774.7427	Rebar MFFF Construction	Option 1	MFFF Construction - Installation/Materials	59,420	-	59,420
1774.7428	Civil/Structural Material	Option 1	MFFF Construction - Installation/Materials	44,341,502	-	44,341,502
1774.7429	Distributables - Bulk Commodity - Stainless Steel Ball Valves	Option 1	MFFF Construction - Installation/Materials	15,484,886	1,603,495	17,088,381
1774.7430	Distributable - Bulk Commodity Account - Chillers	Option 1	MFFF Construction - Installation/Materials	2,321,091	-	2,321,091
1774.7431	Bulk Commodity - Fans	Option 1	MFFF Construction - Installation/Materials	-	-	-
1774.7432	Electrical Material and Other Miscellaneous Labor Acct	Option 1	MFFF Construction - Installation/Materials	65,065,750	16,741,316	81,807,066
1774.7433	Instrumentation & Controls Material	Option 1	MFFF Construction - Installation/Materials	75,731,379	(1,923,606)	73,807,772
1774.7434	Chemical Equipment	Option 1	MFFF Construction - Installation/Materials	9,611,090	294,652	9,905,742
1774.7435	Distributables - HVAC Equipment	Option 1	MFFF Construction - Installation/Materials	70,185,312	21,945,835	92,131,147
1774.7436	Suspense Account - Process Equipment	Option 1	MFFF Construction - Installation/Materials	36,697	-	36,697
1774.7438	Mechanical Equipment	Option 1	MFFF Construction - Installation/Materials	106,192,202	37,750,262	143,942,463
1774.7439	Consumable & Expendable Materials Specific to CP-27 – BAP Chemical P	Option 1	MFFF Construction - Installation/Materials	17,061,498	20,717,334	37,778,832
1774.7440	Support Building for the Fabrication of Supports on Site Specific to	Option 1	MFFF Construction - Installation/Materials	16,627,962	22,739,001	39,366,963
1774.7441	BRP Distributables	Option 1	MFFF Construction - Installation/Materials	481,143	-	481,143
1774.7442	Craft Labor for Non-Discipline Specific Scope	Option 1	MFFF Construction - Installation/Materials	7,070,939	-	7,070,939
1774.7445	Craft Orientation & Training	Option 1	MFFF Construction - Installation/Materials	1,205,167	1,908,070	3,113,237
1774.7446	MOX Construction Back Charges	Option 1	MFFF Construction - Installation/Materials	-	-	-
1774.7453	Craft Orientation & Training	Option 1	MFFF Construction - Installation/Materials	125,868	-	125,868
1774.7454	Bulk Procurement - Material	Option 1	MFFF Construction - Installation/Materials	408,080	(154,104)	253,976
1774.7455	Distributable - Subcontract	Option 1	MFFF Construction - Installation/Materials	285,974	464,411	750,385
1775.7501	Batch Plant Capital Cost	Option 1	MFFF Construction - Installation/Materials	0	-	-
1775.7502	Batch Plant Operations	Option 1	MFFF Construction - Installation/Materials	0	-	0
1775.7503	Batch Plant Concrete Materials	Option 1	MFFF Construction - Installation/Materials	0	-	(0)
MFFF Construction - Installation/Materials Subtotal				\$ 1,998,919,307	\$ 205,231,191	\$ 2,204,150,497
1500.8501	Management / Admin	Option 1	Construction Management	\$ 63,202,558	\$ -	\$ 63,202,558
1500.8502	Project Controls	Option 1	Construction Management	32,745,008	-	32,745,008
1500.8503	Quality Assurance	Option 1	Construction Management	484,283	-	484,283
1500.8504	ES&H	Option 1	Construction Management	694,576	-	694,576
1500.8506	Business	Option 1	Construction Management	4,061,850	-	4,061,850
1501.8511	Business Travel	Option 1	Construction Management	494,312	-	494,312
1501.8512	Temporary Assignments	Option 1	Construction Management	1,802,546	-	1,802,546
1501.8519	Project Controls	Option 1	Construction Management	-	-	-

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MFFF 2012 Rebaseline with Addendum Project Cost by Cost Account

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = [A]+[B]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
1502.8521	Supervision / Admin	Option 1	Construction Management		-	-
1502.8522	Project Controls	Option 1	Construction Management		-	-
1502.8523	Quality Assurance	Option 1	Construction Management		-	-
1502.8524	ES&H	Option 1	Construction Management		-	-
1503.8531	Supervision / Admin	Option 1	Construction Management		-	-
1503.8532	Project Controls	Option 1	Construction Management		-	-
1503.8534	ES&H	Option 1	Construction Management		-	-
1504.8512	Temporary Assignments	Option 1	Construction Management	1,858	-	1,858
1504.8541	Supervision / Admin	Option 1	Construction Management	103,593,854	4,043,003	107,636,857
1504.8542	Work Control Group	Option 1	Construction Management		-	-
1505.8551	Supervision / Admin	Option 1	Construction Management	3,461,412	-	3,461,412
1505.8552	Project Controls	Option 1	Construction Management		-	-
1505.8554	ES&H	Option 1	Construction Management		-	-
Construction Management Subtotal				\$ 210,542,258	\$ 4,043,003	\$ 214,585,261
1901.6017	Human Performance Improvement Program	Option 1	QA	\$ 162,906	\$ -	\$ 162,906
1901.6018	QA/QC - JLE/LTTA	Option 1	QA		-	-
1901.6020	QA Program Management & Administration	Option 1	QA	12,989,851	-	12,989,851
1901.6021	Quality Engineering	Option 1	QA	24,010,181	-	24,010,181
1901.6022	Audit & Surveillance	Option 1	QA	13,036,397	-	13,036,397
1901.6023	Quality Control Projects	Option 1	QA	76,076,877	2,869,622	78,946,499
1901.6024	QA & QC Assembly GS	Option 1	QA	4,392,446	-	4,392,446
1901.6025	MOX Potential Back Charges	Option 1	QA	399	-	399
1901.6026	QA/QC Subcontractors	Option 1	QA	256,791	-	256,791
1901.6027	Testing & Inspection QA/QC	Option 1	QA	22,121,449	-	22,121,449
1901.6028	Commercial Grade Dedication	Option 1	QA	54,273	-	54,273
1901.6029	Regulatory Compliance	Option 1	QA	5,147,845	-	5,147,845
1901.9003	Quality Engineering	Option 1	QA		-	-
1901.9503	Quality Engineering	Option 1	QA		-	-
1902.6017	Human Performance Improvement Program	Option 1	QA	10,204	-	10,204
1902.6020	QA Program Management & Administration	Option 1	QA	1,809,790	-	1,809,790
1902.6021	Quality Engineering	Option 1	QA	1,277,372	-	1,277,372
1902.6022	Audit & Surveillance	Option 1	QA	1,270,862	-	1,270,862
1902.6023	Quality Control Projects	Option 1	QA	2,036,800	-	2,036,800
1902.6026	QA/QC Subcontractors	Option 1	QA	22,215	-	22,215
1902.6027	Testing & Inspection QA/QC	Option 1	QA	349,467	-	349,467
1902.6029	Regulatory Compliance	Option 1	QA	983,821	-	983,821
1902.9503	Quality Engineering	Option 1	QA		-	-
Quality Assurance Subtotal				\$ 166,009,946	\$ 2,869,622	\$ 168,879,568
0601.6001	Communications	Option 1	Not Claimed- All Other	\$ -	-	\$ -
0601.6009	Relocations	Option 1	Not Claimed- All Other		-	-
0602.6010	Project Controls	Option 1	Not Claimed- All Other		-	-
0604.6032	Training	Option 1	Not Claimed- All Other		-	-
0604.6036	Accounting, Treasury & Invoice Operations	Option 1	Not Claimed- All Other		-	-
0604.6038	Facility Management	Option 1	Not Claimed- All Other		-	-
0604.6042	PERC\$	Option 1	Not Claimed- All Other		-	-

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MFFF 2012 Rebaseline with Addendum Project Cost by Cost Account

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = [A]+[B]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
0604.6047	Legal Expenses	Option 1	Not Claimed- All Other		-	-
0606.6057	Engineered Equipment Group	Option 1	Not Claimed- All Other		-	-
0607.6060	IT Support	Option 1	Not Claimed- All Other		-	-
0607.6061	IT Other Direct Costs (ODCs)	Option 1	Not Claimed- All Other		-	-
0611.6001	Communications	Option 1	Not Claimed- All Other		-	-
0611.6090	Project Systems Assessment - NNSA (OPC)	Option 1	Not Claimed- All Other		-	-
0614.6033	Materials Management	Option 1	Not Claimed- All Other		-	-
1000.8005	Document Management	Option 1	Not Claimed- All Other	450,677	-	450,677
1000.8006	Engineering Training	Option 1	Not Claimed- All Other	1,124,889	-	1,124,889
1001.8011	Business Travel	Option 1	Not Claimed- All Other	334,582	-	334,582
1001.8012	Temporary Assignments	Option 1	Not Claimed- All Other		-	-
1001.8019	Other ODCs	Option 1	Not Claimed- All Other	792,740	-	792,740
1002.8022	Chemical	Option 1	Not Claimed- All Other	620,664	-	620,664
1002.8023	Mechanical	Option 1	Not Claimed- All Other	93,201	-	93,201
1002.8024	Laboratory	Option 1	Not Claimed- All Other	63,836	-	63,836
1002.8026	Safety	Option 1	Not Claimed- All Other	79,743	-	79,743
1002.8027	Reference Plant Support	Option 1	Not Claimed- All Other	28,220	-	28,220
1003.8031	Supervision / Admin	Option 1	Not Claimed- All Other	1,000,816	-	1,000,816
1003.8038	Engineering Mechanics - Site Construction Support	Option 1	Not Claimed- All Other		-	-
1004.8046	Chemical-Procurement/Fabrication Support	Option 1	Not Claimed- All Other		-	-
1004.8048	Plant Configuration - Construction, Procurement & Fabrication Support	Option 1	Not Claimed- All Other		-	-
1004.8049	Equipment Qualification	Option 1	Not Claimed- All Other	426,083	-	426,083
1005.8051	Supervision / Admin	Option 1	Not Claimed- All Other	141,465	-	141,465
1005.8059	Plant Configuration	Option 1	Not Claimed- All Other		-	-
1100.8101	Management / Administration	Option 1	Not Claimed- All Other	210,215	-	210,215
1100.8102	NSA Project Controls	Option 1	Not Claimed- All Other	94,764	-	94,764
1101.8111	Business Travel	Option 1	Not Claimed- All Other	87,121	-	87,121
1101.8119	Other ODCs (Legal & S/C Costs)	Option 1	Not Claimed- All Other	896,882	-	896,882
1102.8122	Compliance Program	Option 1	Not Claimed- All Other	912,882	-	912,882
1103.8132	Chemical Safety Support	Option 1	Not Claimed- All Other	2,050,513	-	2,050,513
1103.8133	Laboratory Support	Option 1	Not Claimed- All Other	1,228,793	-	1,228,793
1104.8151	Criticality Safety Procurement & Cons	Option 1	Not Claimed- All Other		-	-
1105.8151	Criticality Safety Procurement & Const Support	Option 1	Not Claimed- All Other	3,169,473	-	3,169,473
1105.8152	Criticality Safety Startup Support	Option 1	Not Claimed- All Other	1,434,865	-	1,434,865
1105.8153	Criticality Safety Licensing Support	Option 1	Not Claimed- All Other	2,046,062	-	2,046,062
1105.8154	Nuclear Radiation Protections	Option 1	Not Claimed- All Other	2,737,319	-	2,737,319
1105.8155	Nuclear Radiation & Criticality Monitoring	Option 1	Not Claimed- All Other	594,766	-	594,766
1105.8156	Emerg. Planning & Deactivation Design Spt.	Option 1	Not Claimed- All Other	143,133	-	143,133
1106.8116	Integrated Safety Analysis	Option 1	Not Claimed- All Other		-	-
1106.8161	Defense of the Safety Basis	Option 1	Not Claimed- All Other	2,663,143	-	2,663,143
1106.8162	ISA Review of Design/Construction Modification	Option 1	Not Claimed- All Other	2,831,117	-	2,831,117
1106.8164	Update the Safety Basis	Option 1	Not Claimed- All Other	3,584,413	-	3,584,413
1106.8165	Support Update of the ISA Summary	Option 1	Not Claimed- All Other	1,211,164	-	1,211,164
1109.8192	Physical Security Program	Option 1	Not Claimed- All Other	2,940,859	-	2,940,859
1109.8193	Material Control & Accountability Program	Option 1	Not Claimed- All Other	1,597,569	-	1,597,569
1109.8195	DOE/WSRC Costs	Option 1	Not Claimed- All Other		-	-
1757.5700	AP Chemical Units	Option 1	Not Claimed- All Other		-	-
1757.5720	AP Mechanical Units	Option 1	Not Claimed- All Other		-	-

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MFFF 2012 Rebaseline with Addendum Project Cost by Cost Account

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = [A]+[B]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
2000.9001	Management / Administration	Option 1	Not Claimed- All Other		-	-
2000.9002	Project Controls	Option 1	Not Claimed- All Other		-	-
2000.9003	Quality Assurance	Option 1	Not Claimed- All Other		-	-
2000.9004	Environment, Safety & Health	Option 1	Not Claimed- All Other		-	-
2001.9011	Business Travel	Option 1	Not Claimed- All Other	1,049,346	-	1,049,346
2001.9012	Temporary Assignments	Option 1	Not Claimed- All Other	71,116	-	71,116
2001.9014	Test Equipment & Consumables	Option 1	Not Claimed- All Other	1,927,294	-	1,927,294
2001.9017	Spare Parts	Option 1	Not Claimed- All Other	385,458	-	385,458
2002.9021	Generic Test Documents	Option 1	Not Claimed- All Other	1,500,169	-	1,500,169
2002.9022	Validation Plans	Option 1	Not Claimed- All Other	1,059,587	-	1,059,587
2002.9023	General Test Programs	Option 1	Not Claimed- All Other	2,380,380	-	2,380,380
2002.9024	Technical Support	Option 1	Not Claimed- All Other	2,488,803	-	2,488,803
2002.9026	Cold Startup Training	Option 1	Not Claimed- All Other	155,818	-	155,818
2002.9527	Generic Test Documents	Option 1	Not Claimed- All Other		-	-
2003.9011	Generic Test Documents	Option 1	Not Claimed- All Other		-	-
2003.9031	In-Advance Tests in U.S.	Option 1	Not Claimed- All Other	8,577,404	-	8,577,404
2003.9032	In-Advance Tests in Europe	Option 1	Not Claimed- All Other	2,238,999	-	2,238,999
2004.9041	Aqueous Polishing	Option 1	Not Claimed- All Other	17,121,299	-	17,121,299
2004.9042	MOX Process	Option 1	Not Claimed- All Other	21,675,945	-	21,675,945
2004.9043	Balance of Plant	Option 1	Not Claimed- All Other	15,238,873	-	15,238,873
2004.9044	Reaction to General Incident (RGI)	Option 1	Not Claimed- All Other	2,529,087	-	2,529,087
2004.9047	Turnover & Logistics	Option 1	Not Claimed- All Other		-	-
2004.9048	Laboratory - IPT	Option 1	Not Claimed- All Other	8,094,707	-	8,094,707
2004.9049	Process Control - IPT	Option 1	Not Claimed- All Other	7,939,498	-	7,939,498
2005.9051	SU In-Advance Tests Rework and Modifications in US	Option 1	Not Claimed- All Other	176,629	-	176,629
2007.9071	MOX IPT Rework	Option 1	Not Claimed- All Other	34,495,693	-	34,495,693
2010.9101	Management / Administration - IPT	Option 1	Not Claimed- All Other		-	-
2010.9102	Project Controls - IPT	Option 1	Not Claimed- All Other		-	-
2011.9111	Business Travel - IPT	Option 1	Not Claimed- All Other	310,955	-	310,955
2011.9112	Generic Test Documents	Option 1	Not Claimed- All Other		-	-
2011.9114	Test Equipment & Consumables - IPT	Option 1	Not Claimed- All Other	11,050,555	-	11,050,555
2011.9117	Spare Parts - IPT	Option 1	Not Claimed- All Other		-	-
2012.9124	Technical Support - IPT	Option 1	Not Claimed- All Other	168,776	-	168,776
2012.9126	Cold Startup Training - IPT	Option 1	Not Claimed- All Other		-	-
2201.8138	Relocation	Option 1	Not Claimed- All Other		-	-
2201.8139	Field Office Supplies	Option 1	Not Claimed- All Other		-	-
2201.8141	ES&H Program	Option 1	Not Claimed- All Other		-	-
2201.8143	Environmental Protection Program	Option 1	Not Claimed- All Other		-	-
2201.8144	Industrial Safety Program	Option 1	Not Claimed- All Other		-	-
2201.8145	Waste Management Program	Option 1	Not Claimed- All Other		-	-
2201.8146	Fitness for Duty Program	Option 1	Not Claimed- All Other		-	-
2201.8147	Emergency Preparedness Program	Option 1	Not Claimed- All Other		-	-
2201.8148	Employee Safety Incentive Program	Option 1	Not Claimed- All Other		-	-
2201.8149	ES & H Safety Engineer	Option 1	Not Claimed- All Other		-	-
2201.8820	Field Office Supplies	Option 1	Not Claimed- All Other		-	-
2201.9004	Field Office Supplies	Option 1	Not Claimed- All Other		-	-
2201.9504	Field Office Supplies	Option 1	Not Claimed- All Other		-	-
2201.9506	Field Office Supplies	Option 1	Not Claimed- All Other		-	-
2202.8139	Field Office Supplies	Option 1	Not Claimed- All Other		-	-
2202.8145	Waste Management Program	Option 1	Not Claimed- All Other		-	-

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MFFF 2012 Rebaseline with Addendum Project Cost by Cost Account

				[A]	[B]	[C] = [A]+[B]
Cost Account	Cost Account Description	Contract	Claim Category	2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
2202.9004	Field Office Supplies	Option 1	Not Claimed- All Other		-	-
2202.9506	Field Office Supplies	Option 1	Not Claimed- All Other		-	-
9008.0901	DOE Annual Costs for the SRS M&O Support to MOX fo all Infrastructur	Option 1	Not Claimed- All Other	65,437,317	-	65,437,317
9009.0901	DOE/WSRC Support	Option 1	Not Claimed- All Other		-	-
9009.0902	DOE Annual Costs for the SRS M&O Support to MOX for Infrastructure S	Option 1	Not Claimed- All Other	56,179,840	-	56,179,840
9009.0903	DOE Tech Spt. (Non-MOX Services Cost)	Option 1	Not Claimed- All Other	115,039,367	547,917	115,587,284
All Other Subtotal				\$ 412,884,884	\$ 547,917	\$ 413,432,801
Option 1 Subtotal				\$ 5,287,915,260	\$ 275,836,121	\$ 5,563,751,381
0110.5101	NRC Costs - MFFF	Base	Not Claimed- Base Contract	\$ 12,646,529	\$ -	\$ 12,646,529
0110.5301	Environmental Report	Base	Not Claimed- Base Contract	1,822,489	-	1,822,489
0110.5302	Electrolyzer Testing	Base	Not Claimed- Base Contract	268,684	-	268,684
0110.5303	ORNL Gallium Testing	Base	Not Claimed- Base Contract	100,000	-	100,000
0110.5304	ORNL Criticality Review	Base	Not Claimed- Base Contract	150,000	-	150,000
0110.5305	Clemson University Research	Base	Not Claimed- Base Contract	1,421,977	-	1,421,977
0110.5306	Develpment & Test Programs	Base	Not Claimed- Base Contract	2,111,621	-	2,111,621
0110.5307	Site Develop./Infrast. Improvement OPC Work	Base	Not Claimed- Base Contract	496,340	-	496,340
0110.5308	SCE Scanner Testing	Base	Not Claimed- Base Contract	511,780	-	511,780
0110.5401	MFFF Operations Planning	Base	Not Claimed- Base Contract	(84,994)	-	(84,994)
0110.5402	Safety & Systems Integration	Base	Not Claimed- Base Contract	210,415	-	210,415
0110.5411	Licensing	Base	Not Claimed- Base Contract	5,107,144	-	5,107,144
0110.5421	Engineering Support to Licensing - PDG	Base	Not Claimed- Base Contract	98,149	-	98,149
0110.5422	Engineering Support to Licensing - FDG	Base	Not Claimed- Base Contract	121,379	-	121,379
0110.5423	Engine+B1001ering Support to Licensing - C/S	Base	Not Claimed- Base Contract	116,292	-	116,292
0110.5424	Eng. Support to Lic. - Mech.Prog.	Base	Not Claimed- Base Contract	283,621	-	283,621
0110.5425	Eng. Support to Lic.- Elect/ I&C/S&S/MC&A	Base	Not Claimed- Base Contract	25,078	-	25,078
0110.5427	Engr Support to Lic - Nuclear Safety	Base	Not Claimed- Base Contract	4,823,621	-	4,823,621
0110.5428	MFFF Environmental / Permitting	Base	Not Claimed- Base Contract	320,086	-	320,086
0110.5431	Facility Security Vulnerability Assessment	Base	Not Claimed- Base Contract	181,482	-	181,482
0110.5432	Facility Licensing Plans	Base	Not Claimed- Base Contract	2,305,639	-	2,305,639
0110.5450	Miscellaneous Studies	Base	Not Claimed- Base Contract	970,612	-	970,612
0110.5451	Coord. & Oversight of CETL Research Projects	Base	Not Claimed- Base Contract	285,972	-	285,972
0110.5452	CAB Change Phase II Scoping & Devel	Base	Not Claimed- Base Contract	180,858	-	180,858
0110.5453	Monitoring & Inspection Impacts Study	Base	Not Claimed- Base Contract	30,935	-	30,935
0110.5454	CAB Phase II	Base	Not Claimed- Base Contract	3,875	-	3,875
0110.5455	Maximize the use of MFFF Study	Base	Not Claimed- Base Contract	104,822	-	104,822
0110.5499	Control Area Boundary Change Scoping	Base	Not Claimed- Base Contract	731,640	-	731,640
0110.5601	DNFSB	Base	Not Claimed- Base Contract	60	-	60
0111.1101	General	Base	Not Claimed- Base Contract	4,800,117	-	4,800,117
0111.1102	Mobilization, De-Mob, & Close-out	Base	Not Claimed- Base Contract	899,521	-	899,521
0111.1103	Management	Base	Not Claimed- Base Contract	5,945,756	-	5,945,756
0111.1104	Administrative	Base	Not Claimed- Base Contract	2,667,640	-	2,667,640
0111.1105	Support Services	Base	Not Claimed- Base Contract	5,107,135	-	5,107,135
0111.1106	Miscellaneous	Base	Not Claimed- Base Contract	737,690	-	737,690
0111.1107	General Expenses	Base	Not Claimed- Base Contract	14,553,159	-	14,553,159
0111.1108	Procedure Development	Base	Not Claimed- Base Contract	29	-	29
0112.8301	MDG Base Contract (Pre FY 2003)	Base	Not Claimed- Base Contract	5,049,539	-	5,049,539
0113.1301	General	Base	Not Claimed- Base Contract	16,151,645	-	16,151,645
0113.1302	Receiving	Base	Not Claimed- Base Contract	814,098	-	814,098

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MFFF 2012 Rebaseline with Addendum Project Cost by Cost Account

				[A]	[B]	[C] = [A]+[B]
Cost Account	Cost Account Description	Contract	Claim Category	2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
0113.1303	Powder	Base	Not Claimed- Base Contract	2,927,651	-	2,927,651
0113.1304	Pellets	Base	Not Claimed- Base Contract	2,066,298	-	2,066,298
0113.1305	Cladding	Base	Not Claimed- Base Contract	1,415,796	-	1,415,796
0113.1306	Assembling	Base	Not Claimed- Base Contract	967,433	-	967,433
0113.1307	Laboratory	Base	Not Claimed- Base Contract	557,757	-	557,757
0113.1308	Samples Pneumatic Transfer	Base	Not Claimed- Base Contract	191,097	-	191,097
0113.1309	Waste Management	Base	Not Claimed- Base Contract	436,733	-	436,733
0113.1310	Material Control & Accountability	Base	Not Claimed- Base Contract	325,534	-	325,534
0113.1311	Process Control	Base	Not Claimed- Base Contract	422,672	-	422,672
0113.1312	Integrated Safety Analysis	Base	Not Claimed- Base Contract	5,080,631	-	5,080,631
0113.1313	Facility Input	Base	Not Claimed- Base Contract	819,425	-	819,425
0113.1399	PDG MOX Process Unplanned Work	Base	Not Claimed- Base Contract	363,641	-	363,641
0114.1401	General	Base	Not Claimed- Base Contract	4,943,475	-	4,943,475
0114.1402	Dissolution	Base	Not Claimed- Base Contract	4,396,665	-	4,396,665
0114.1403	Purification	Base	Not Claimed- Base Contract	3,989,262	-	3,989,262
0114.1404	Conversion	Base	Not Claimed- Base Contract	1,662,388	-	1,662,388
0114.1405	Facility Input	Base	Not Claimed- Base Contract	3,073,636	-	3,073,636
0114.1406	Safety	Base	Not Claimed- Base Contract	7,785,239	-	7,785,239
0115.1501	General	Base	Not Claimed- Base Contract	13,628,548	-	13,628,548
0115.1502	Buildings, Structures & Yard	Base	Not Claimed- Base Contract	37,399,208	-	37,399,208
0115.1503	Deliverables	Base	Not Claimed- Base Contract	20,283	-	20,283
0115.1504	Mechanical Programs	Base	Not Claimed- Base Contract	66,178,370	1,081,891	67,260,261
0115.1505	Electrical Programs	Base	Not Claimed- Base Contract	917,015	-	917,015
0115.1506	Nuclear Safety Programs	Base	Not Claimed- Base Contract	14,413,675	-	14,413,675
0115.1507	Mechanical Systems & Components	Base	Not Claimed- Base Contract	28,782,999	-	28,782,999
0115.1508	Electrical Systems & Components	Base	Not Claimed- Base Contract	40,963,289	-	40,963,289
0115.1509	Nuclear Safety Systems & Components	Base	Not Claimed- Base Contract	2,710,756	-	2,710,756
0115.1510	Process Mechanical	Base	Not Claimed- Base Contract	15,181,618	-	15,181,618
0115.1511	Mechanical Gloveboxes	Base	Not Claimed- Base Contract	5,593,595	-	5,593,595
0115.1512	Site Development / Infrastructure Improvement	Base	Not Claimed- Base Contract	1,966,135	-	1,966,135
0115.1513	Plant Design System	Base	Not Claimed- Base Contract	52,102,682	450,617	52,553,299
0115.8154	Nuclear Radiation Protections	Base	Not Claimed- Base Contract	-	-	-
0116.1601	DNFSB & Commonality Questions & Issues	Base	Not Claimed- Base Contract	535	-	535
0116.8401	SDG Base Contract Pre-FY 2003	Base	Not Claimed- Base Contract	2,463,869	-	2,463,869
0117.1701	Licensing	Base	Not Claimed- Base Contract	14,916,060	-	14,916,060
0117.1702	Environmental Report	Base	Not Claimed- Base Contract	6,128	-	6,128
0117.1703	Environment	Base	Not Claimed- Base Contract	457,912	-	457,912
0117.1704	Safety & Health	Base	Not Claimed- Base Contract	713,480	-	713,480
0117.1705	Emergency Planning	Base	Not Claimed- Base Contract	149,349	-	149,349
0117.1706	ISA Support (Contractor's ODCs)	Base	Not Claimed- Base Contract	19,852,077	-	19,852,077
0117.1707	Technology Assessment (TA) Support	Base	Not Claimed- Base Contract	1,571,146	-	1,571,146
0117.1710	UCNI Training	Base	Not Claimed- Base Contract	93,039	-	93,039
0118.1801	Office rent, suppl/serv, equi.& furnit L&P	Base	Not Claimed- Base Contract	2,994,997	-	2,994,997
0118.1802	Furniture	Base	Not Claimed- Base Contract	2,378,913	-	2,378,913
0118.1803	Cabling & Telephone	Base	Not Claimed- Base Contract	94,023	-	94,023
0118.1804	Upfit	Base	Not Claimed- Base Contract	387,936	-	387,936
0118.1805	Relocation Services	Base	Not Claimed- Base Contract	10,495	-	10,495
0118.1806	Remote Location Office Space	Base	Not Claimed- Base Contract	415,133	-	415,133
0119.1901	Computer Equipment & Software L&P	Base	Not Claimed- Base Contract	5,719,902	-	5,719,902
0119.1902	Software	Base	Not Claimed- Base Contract	1,136,702	-	1,136,702

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MFFF 2012 Rebaseline with Addendum Project Cost by Cost Account

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = [A]+[B]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
0119.1903	Service Contracts	Base	Not Claimed- Base Contract	283,607	-	283,607
0119.1904	Initial Setup	Base	Not Claimed- Base Contract	13,101	-	13,101
0120.8110	Project Management Pre-Construction Planning	Base	Not Claimed- Base Contract	4,974,617	-	4,974,617
0120.8120	Project Controls Pre-Construction	Base	Not Claimed- Base Contract	2,525,925	-	2,525,925
0120.8130	Project QA Pre-Construction	Base	Not Claimed- Base Contract	-	-	-
0120.8140	Project ES&H Pre-Construction	Base	Not Claimed- Base Contract	758,325	-	758,325
0120.8160	Project Services & Admin Pre-Construction	Base	Not Claimed- Base Contract	64,361	-	64,361
0120.8170	Procure./Subcontract Admin Pre-Construction	Base	Not Claimed- Base Contract	284,712	-	284,712
0120.8200	PreOpt1BConstrPrjTitleIII EngineeringMgmt-LL EnginProcurement	Base	Not Claimed- Base Contract	3,153	-	3,153
0120.8210	Engineering Civil / Structural Pre-Construction	Base	Not Claimed- Base Contract	177,361	-	177,361
0120.8220	Engineering Mechanical Pre-Construction	Base	Not Claimed- Base Contract	39,784	-	39,784
0120.8230	Engineering Electrical / I&C Pre-Construction	Base	Not Claimed- Base Contract	60,918	-	60,918
0121.1654	MFFF Operations Planning	Base	Not Claimed- Base Contract	10,880,272	-	10,880,272
0122.1611	PuO2 Polishing Planning	Base	Not Claimed- Base Contract	159,814	-	159,814
0122.1612	DUO2 Supply Planning	Base	Not Claimed- Base Contract	488,321	-	488,321
0123.1420	Up Front Design	Base	Not Claimed- Base Contract	2,823,111	-	2,823,111
0124.1415	DMO - Preserve The Option	Base	Not Claimed- Base Contract	3,134,723	-	3,134,723
0661.6101	Project Office Operations	Base	Not Claimed- Base Contract	6,418,213	-	6,418,213
0661.6102	Personnel Relocations	Base	Not Claimed- Base Contract	57,213	-	57,213
0661.6103	Project Support Services	Base	Not Claimed- Base Contract	97	-	97
0661.6105	Mixed Oxide (MOX) Proj. Ext. Communications	Base	Not Claimed- Base Contract	440,973	-	440,973
0661.6106	IT Labor	Base	Not Claimed- Base Contract	3,753,790	-	3,753,790
0661.6110	Independent Review Team (IRT) Review - NA54	Base	Not Claimed- Base Contract	1,486,360	-	1,486,360
0661.6150	Relocations	Base	Not Claimed- Base Contract	3,056,897	-	3,056,897
0662.6201	Project Controls & Integration	Base	Not Claimed- Base Contract	14,129,225	-	14,129,225
0662.6202	Risk Management	Base	Not Claimed- Base Contract	923,190	-	923,190
0663.6301	QA Program Management & Administration	Base	Not Claimed- Base Contract	597,540	-	597,540
0663.6302	Quality Engineering	Base	Not Claimed- Base Contract	1,224,692	-	1,224,692
0663.6303	Quality Verification	Base	Not Claimed- Base Contract	1,286,519	-	1,286,519
0664.6401	ES&H Integration	Base	Not Claimed- Base Contract	1,340,978	-	1,340,978
0664.6402	Regulatory Affairs Management & Admin.	Base	Not Claimed- Base Contract	431,238	-	431,238
0664.6403	Safety and Health	Base	Not Claimed- Base Contract	75	-	75
0664.6404	Incident Investigation / Corrective Action Program	Base	Not Claimed- Base Contract	(53)	-	(53)
0665.6501	Trade-off Studies	Base	Not Claimed- Base Contract	2,286	-	2,286
0665.6502	Plutonium (Pu) Disposition Study	Base	Not Claimed- Base Contract	457	-	457
0665.6505	NA	Base	Not Claimed- Base Contract	-	-	-
0666.6600	Project Services & Administration	Base	Not Claimed- Base Contract	1,670	-	1,670
0666.6601	Contracts	Base	Not Claimed- Base Contract	19,104,032	-	19,104,032
0666.6602	Administration	Base	Not Claimed- Base Contract	2,607,252	-	2,607,252
0666.6603	Electronic Doc / Records Management	Base	Not Claimed- Base Contract	1,809,605	-	1,809,605
0666.6604	Training & Internal Communication	Base	Not Claimed- Base Contract	362,896	-	362,896
0666.6605	Project Accounting / Finance	Base	Not Claimed- Base Contract	2,912,125	-	2,912,125
0666.6606	Bank Analysis Fees	Base	Not Claimed- Base Contract	16,703	-	16,703
0666.6608	Procurement	Base	Not Claimed- Base Contract	3,027,990	-	3,027,990
0666.6609	Asset Management	Base	Not Claimed- Base Contract	287,005	-	287,005
0667.6701	Licensing	Base	Not Claimed- Base Contract	4,830	-	4,830
0668.6801	Charlotte Office Space	Base	Not Claimed- Base Contract	52,238	-	52,238
0668.6802	Furniture	Base	Not Claimed- Base Contract	33,304	-	33,304
0668.6803	Cabling & Telephone	Base	Not Claimed- Base Contract	(17,325)	-	(17,325)
0668.6804	UpFit	Base	Not Claimed- Base Contract	3,962	-	3,962

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MFFF 2012 Rebaseline with Addendum Project Cost by Cost Account

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = [A]+[B]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
0668.6805	Relocation Services	Base	Not Claimed- Base Contract	2,456	-	2,456
0668.6806	Remote Location Office Space	Base	Not Claimed- Base Contract	46,201	-	46,201
0668.6810	Office Rent, Supplies, & Services	Base	Not Claimed- Base Contract	5,833,773	-	5,833,773
0668.6811	Office Equipment & Furniture Lease & Purchase	Base	Not Claimed- Base Contract	2,607,350	-	2,607,350
0668.6812	Computer Equipment and Software Leases & Purchases	Base	Not Claimed- Base Contract	8,043,555	-	8,043,555
0668.8810	Offsite Office Rent, Supplies & Services	Base	Not Claimed- Base Contract	3,331,590	-	3,331,590
0668.8811	Offsite Off.Equip.& Furnit. L. & P., and Workspace Upfit	Base	Not Claimed- Base Contract	328,503	-	328,503
0668.8812	Offsite Computer Equip.& Software L.& P.	Base	Not Claimed- Base Contract	749,822	-	749,822
0669.6901	Computer Hardware	Base	Not Claimed- Base Contract	74,923	-	74,923
0669.6902	Computer Software	Base	Not Claimed- Base Contract	21,717	-	21,717
0669.6903	Computer Services Contracts	Base	Not Claimed- Base Contract	18,228	-	18,228
0669.6904	Initial Setup	Base	Not Claimed- Base Contract	(9,464)	-	(9,464)
0670.8299	Process Unit Assembly Planning	Base	Not Claimed- Base Contract	2,234,104	-	2,234,104
1204.8240	PEG BOA's, Sole Source & Adv.Procure. Items	Base	Not Claimed- Base Contract	7,094,929	-	7,094,929
1204.8241	PEG Management	Base	Not Claimed- Base Contract	8,089,063	-	8,089,063
1204.8242	PEG Training & Technical Support	Base	Not Claimed- Base Contract	4,473,163	-	4,473,163
1204.8243	PEG Build to Print Manuf./Install. Required	Base	Not Claimed- Base Contract	420,711	-	420,711
1204.8244	PEG AP/MP Laboratory Design/Build	Base	Not Claimed- Base Contract	2,151,804	-	2,151,804
1204.8245	PEG Documents External Review Support	Base	Not Claimed- Base Contract	411,870	-	411,870
1204.8246	Process Support AP/MP Lab Design/Build	Base	Not Claimed- Base Contract	1,534,414	-	1,534,414
1204.8247	PreOpt1ACnstPrjctProcUnitPEGVendorDesign	Base	Not Claimed- Base Contract	36,139,755	-	36,139,755
1204.8248	PreOpt1BProcUnitsPEG Design/Bld UnitSpecs	Base	Not Claimed- Base Contract	10,069,627	-	10,069,627
1204.8249	PreOpt1ACnstPrjct Proc Units PEG ODCs	Base	Not Claimed- Base Contract	1,431,198	-	1,431,198
1204.8293	Mech/Struct Procurements Engineering	Base	Not Claimed- Base Contract	-	-	-
1205.8250	US Regulations/ Process Requirements	Base	Not Claimed- Base Contract	5,078,781	-	5,078,781
1205.8251	PreOpt1BConstPrjProc-USRG/PRG Req Mgmt	Base	Not Claimed- Base Contract	1,726,646	-	1,726,646
1205.8252	US Regulations Personnel	Base	Not Claimed- Base Contract	1,943,952	-	1,943,952
1205.8253	Process Requirements Personnel	Base	Not Claimed- Base Contract	4,723,359	-	4,723,359
1205.8254	Pre-Option 1A Construction Project Process-General Support	Base	Not Claimed- Base Contract	1,631,079	-	1,631,079
1205.8255	PreOpt1AConstPrjProc-USRG/PRG Admin Spt	Base	Not Claimed- Base Contract	254	-	254
1205.8256	Facility Design Group Support to PEG	Base	Not Claimed- Base Contract	582,035	-	582,035
1205.8257	Systems Engineering Group Support to I55EG	Base	Not Claimed- Base Contract	251,565	-	251,565
1205.8259	PreOpt1AConstPrjProc-USRG/PRG - ODCs	Base	Not Claimed- Base Contract	1,037,150	-	1,037,150
1209.8290	Pre-Option 1B MDG, SDG & PEG Management	Base	Not Claimed- Base Contract	4,788,660	-	4,788,660
1209.8291	DCS Equipment Group Management - ODCs	Base	Not Claimed- Base Contract	552,464	-	552,464
1211.8131	Project QA - Option 1	Base	Not Claimed- Base Contract	666,916	-	666,916
1211.8171	PreOp1BCnstPrjMgmtPurchs Procurement - Mgt & Admin	Base	Not Claimed- Base Contract	1,817,722	-	1,817,722
1212.8292	Commercial Grade Dedication (CGD)	Base	Not Claimed- Base Contract	10,305,148	2,071,902	12,377,050
1212.8293	Chemical/Mechanical Subcontract Technical Representatives (STRs) and	Base	Not Claimed- Base Contract	13,418,339	3,755,396	17,173,735
1212.8294	Electrical/I&C Procurements Engineering	Base	Not Claimed- Base Contract	6,547,780	2,720,741	9,268,521
1212.8295	PEG Support of Others (Facility Eq)	Base	Not Claimed- Base Contract	463	-	463
1212.8296	PassPort Implementation & Support Engineering	Base	Not Claimed- Base Contract	2,291,097	-	2,291,097
1212.8297	PEG - Vendor Support Activities for Self Procurements	Base	Not Claimed- Base Contract	13,490	-	13,490
1212.8298	PEG Management & Administration (Facility Eq)	Base	Not Claimed- Base Contract	1,271,685	-	1,271,685
1213.8292	PEG Technical Support & Training (Facility Eq)	Base	Not Claimed- Base Contract	591,906	-	591,906
1301.8302	DCS Integrated Mgt	Base	Not Claimed- Base Contract	6,536,527	-	6,536,527
1301.8303	MDG Support Services	Base	Not Claimed- Base Contract	2,554,857	-	2,554,857
1301.8304	MDG Travel & Relocation - DCS	Base	Not Claimed- Base Contract	2,923,393	-	2,923,393
1301.8305	Production Centers Mgt	Base	Not Claimed- Base Contract	1,834,853	-	1,834,853
1301.8306	MDG Travel & Relocation Production Centers	Base	Not Claimed- Base Contract	1,574,026	-	1,574,026

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MFFF 2012 Rebaseline with Addendum Project Cost by Cost Account

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = [A]+[B]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
1301.8307	MDG ODCs Production Centers	Base	Not Claimed- Base Contract	2,907,943	-	2,907,943
1301.8308	MDG Procurement Engineering Support	Base	Not Claimed- Base Contract	806,667	-	806,667
1301.8390	Design Offices Mgt	Base	Not Claimed- Base Contract	13,209,064	-	13,209,064
1301.8391	Production Internal Support	Base	Not Claimed- Base Contract	11,044,415	-	11,044,415
1302.8302	GDE - Rod Decladding	Base	Not Claimed- Base Contract	-	-	-
1302.8309	Technical Management	Base	Not Claimed- Base Contract	14,604,868	-	14,604,868
1302.8310	Technical Requirement Representatives	Base	Not Claimed- Base Contract	3,394,330	-	3,394,330
1302.8391	GDE - Rod Decladding	Base	Not Claimed- Base Contract	-	-	-
1302.8392	Follow-up	Base	Not Claimed- Base Contract	11,387,710	-	11,387,710
1302.839A	TSR Support from PDG	Base	Not Claimed- Base Contract	495,197	-	495,197
1302.839B	LLP/LTP/NTP Detailed Piping Design	Base	Not Claimed- Base Contract	188,202	-	188,202
1303.8312	NDD - PuO2 Can Receiving & Emptying	Base	Not Claimed- Base Contract	1,180,158	-	1,180,158
1303.8313	NDP - Primary Dosing	Base	Not Claimed- Base Contract	3,075,251	-	3,075,251
1303.8314	NDS - Final Dosing	Base	Not Claimed- Base Contract	3,093,351	-	3,093,351
1303.8319	NTM - Jar Storage & Handling	Base	Not Claimed- Base Contract	4,266,963	-	4,266,963
1303.8320	NXR - Powder Auxiliary	Base	Not Claimed- Base Contract	2,032,952	-	2,032,952
1304.8311	DCE - PuO2 Buffer Storage	Base	Not Claimed- Base Contract	1,181,879	-	1,181,879
1304.8312	NDD Conformance	Base	Not Claimed- Base Contract	132,157	-	132,157
1304.8313	NDP Conformance	Base	Not Claimed- Base Contract	18,959	-	18,959
1304.8314	NDS Conformance	Base	Not Claimed- Base Contract	120,759	-	120,759
1304.8319	NTM Conformance	Base	Not Claimed- Base Contract	68,967	-	68,967
1304.831A	VDR Design	Base	Not Claimed- Base Contract	393,445	-	393,445
1304.831B	VDU Design	Base	Not Claimed- Base Contract	174,431	-	174,431
1304.831C	DCM Design	Base	Not Claimed- Base Contract	582,630	-	582,630
1304.831G	GMK Design	Base	Not Claimed- Base Contract	235,016	-	235,016
1304.831H	SCE Design	Base	Not Claimed- Base Contract	708,694	-	708,694
1304.831J	SMK Design	Base	Not Claimed- Base Contract	641,167	-	641,167
1304.831L	SXE Design	Base	Not Claimed- Base Contract	403,954	-	403,954
1304.831M	TAS Design	Base	Not Claimed- Base Contract	675,546	-	675,546
1304.831N	TCL/TCK/TGJ Design	Base	Not Claimed- Base Contract	644,809	-	644,809
1304.831P	TCP Design	Base	Not Claimed- Base Contract	371,805	-	371,805
1304.831Q	TGM Design	Base	Not Claimed- Base Contract	1,274,482	-	1,274,482
1304.831R	TGV Design	Base	Not Claimed- Base Contract	-	-	-
1304.831Y	LFV Design	Base	Not Claimed- Base Contract	277,136	-	277,136
1304.8320	NXR Conformance	Base	Not Claimed- Base Contract	2,071	-	2,071
1304.8321	NCR - Scrap Processing	Base	Not Claimed- Base Contract	4,035,217	-	4,035,217
1304.8324	PRE / PRF - Grinding	Base	Not Claimed- Base Contract	2,303,385	-	2,303,385
1304.8325	PTE/PTF — Pellet Inspect & Sorting	Base	Not Claimed- Base Contract	396,055	-	396,055
1304.8326	PQE — Quality Control & Manual Sorting	Base	Not Claimed- Base Contract	444,859	-	444,859
1304.8327	PAD - Pellet Repackaging	Base	Not Claimed- Base Contract	277,167	-	277,167
1304.8328	PAR - Scrap Box Loading	Base	Not Claimed- Base Contract	478,804	-	478,804
1304.8329	PSE - Green Pellet Storage	Base	Not Claimed- Base Contract	629,885	-	629,885
1304.832A	KCB Design	Base	Not Claimed- Base Contract	160,747	-	160,747
1304.832G	KDA Design	Base	Not Claimed- Base Contract	330,971	-	330,971
1304.8330	PSF - Sintered Pellet Storage	Base	Not Claimed- Base Contract	717,822	-	717,822
1304.8331	PSI - Scrape Pellet Storage	Base	Not Claimed- Base Contract	1,146,863	-	1,146,863
1304.8332	PSJ - Ground & Sorted Pellet Storage	Base	Not Claimed- Base Contract	985,943	-	985,943
1304.8333	PML - Pellet Handling	Base	Not Claimed- Base Contract	4,201,902	-	4,201,902
1304.8336	GDE - Rod Decladding	Base	Not Claimed- Base Contract	932,184	-	932,184
1304.8338	SEK Helium Leak Test	Base	Not Claimed- Base Contract	220,636	-	220,636

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MFFF 2012 Rebaseline with Addendum Project Cost by Cost Account

Cost Account	Cost Account Description	Contract	Claim Category	[C] = [A]+[B]		
				[A]	[B]	[C] = [A]+[B]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
1304.8344	LCT - Test Line	Base	Not Claimed- Base Contract	951,193	-	951,193
1304.8345	VDR - Filter Dismantling	Base	Not Claimed- Base Contract	12	-	12
1304.8346	DDP - UO2 Drum Emptying	Base	Not Claimed- Base Contract	537,418	-	537,418
1304.8348	KDM Conformance	Base	Not Claimed- Base Contract	477,130	-	477,130
1304.8363	KDA - Decanning (B)	Base	Not Claimed- Base Contract	3,415,974	-	3,415,974
1304.8365	KPG Sampling, Automatic Conformance	Base	Not Claimed- Base Contract	668,054	-	668,054
1304.8370	KPA 4010 Purification Cycle Conformance	Base	Not Claimed- Base Contract	233,571	-	233,571
1304.8375	KDM - Milling (AFS) - PuO2 Can Handling	Base	Not Claimed- Base Contract	529,834	-	529,834
1304.8376	KDM 2000 - Prepolishing Milling Conformance	Base	Not Claimed- Base Contract	647,479	-	647,479
1304.8377	KDM 2200 Pre-Polishing Milling	Base	Not Claimed- Base Contract	707,373	-	707,373
1304.8378	KDR 1/2/3/4 ADO Conform	Base	Not Claimed- Base Contract	594	-	594
1304.8379	KDR - Recanning Unit	Base	Not Claimed- Base Contract	210,863	-	210,863
1304.8397	Struct. LLE - Aiken	Base	Not Claimed- Base Contract	305,686	-	305,686
1305.8315	LLP Pneumatic Transfer (33 mm)	Base	Not Claimed- Base Contract	1,807,734	-	1,807,734
1305.8316	LLP Pneumatic Transfer (76 mm)	Base	Not Claimed- Base Contract	986,221	-	986,221
1305.8318	NTP Pneumatic Transfer (133 mm)	Base	Not Claimed- Base Contract	1,085,049	-	1,085,049
1305.8325	PTE/PTF - Pellet Inspect & Sorting	Base	Not Claimed- Base Contract	1,593,203	-	1,593,203
1305.8326	PQE - QC & Manual Sorting	Base	Not Claimed- Base Contract	1,186,020	-	1,186,020
1305.8361	KCB - PuO2 Homogenization & Sampling	Base	Not Claimed- Base Contract	1,876,771	-	1,876,771
1305.8362	KCC - Canning	Base	Not Claimed- Base Contract	1,841,250	-	1,841,250
1305.8365	KPG - Liquid Sampling (W1)	Base	Not Claimed- Base Contract	900,405	-	900,405
1305.8366	KDB/KPF Electrolyzers (W9)	Base	Not Claimed- Base Contract	1,365,619	-	1,365,619
1305.8367	KCA - Oxalic Precip Metering Wheels	Base	Not Claimed- Base Contract	821,657	-	821,657
1305.8368	KDA - Dosing Hoppers (W6)	Base	Not Claimed- Base Contract	2,271,901	-	2,271,901
1305.8369	KPA/KPB - Settler Mixers (W7)	Base	Not Claimed- Base Contract	911,336	-	911,336
1305.8370	KPA 4010 Purification Cycle	Base	Not Claimed- Base Contract	377,100	-	377,100
1305.8371	KCA - Oxalic Precip Oxid Precip & Filter	Base	Not Claimed- Base Contract	718,321	-	718,321
1305.8372	KCA - Oxalic Precip Oxid Calcin Furn.	Base	Not Claimed- Base Contract	906,346	-	906,346
1305.8373	KCB - PuO2 Tumbler Mixer	Base	Not Claimed- Base Contract	532,877	-	532,877
1305.8374	KDD - Dechlorination / Dissolution	Base	Not Claimed- Base Contract	3,076,733	-	3,076,733
1305.8376	KDM - Milling (AFS)	Base	Not Claimed- Base Contract	1,955,112	-	1,955,112
1305.8378	KDR - Recanning Unit	Base	Not Claimed- Base Contract	1,711,309	-	1,711,309
1305.8380	KPB 1000 Solvent Recovery	Base	Not Claimed- Base Contract	779,190	-	779,190
1305.8381	KDM-Pre-Polishing MillingUnits6000-7400 Dsgn	Base	Not Claimed- Base Contract	1,119,284	-	1,119,284
1305.8399	Dosing Hopper - Structural Qualification	Base	Not Claimed- Base Contract	48,456	-	48,456
1306.8322	NPE/NPF - Homogenization & Pelletizing	Base	Not Claimed- Base Contract	1,439,629	-	1,439,629
1306.8323	PFE/PFF - Sintering Furnace	Base	Not Claimed- Base Contract	8	-	8
1306.8334	GME - Rod Cladding & Decontamination	Base	Not Claimed- Base Contract	6,773,734	-	6,773,734
1306.8339	SDK - Rod Inspection & Sorting	Base	Not Claimed- Base Contract	1,341,572	-	1,341,572
1306.8347	NBX/NBY - Ball Mining	Base	Not Claimed- Base Contract	2,641,655	-	2,641,655
1306.8348	KDM - Milling	Base	Not Claimed- Base Contract	937,277	-	937,277
1306.8349	NPG/H/I-Homogenization & Pelletizing Design	Base	Not Claimed- Base Contract	5,925,669	-	5,925,669
1306.8398	Struct. LLE - Bagnol	Base	Not Claimed- Base Contract	957,492	-	957,492
1307.831A	VDR	Base	Not Claimed- Base Contract	314,988	-	314,988
1307.831B	VDU	Base	Not Claimed- Base Contract	203,988	-	203,988
1307.831C	DCM	Base	Not Claimed- Base Contract	186,681	-	186,681
1307.831D	DCP	Base	Not Claimed- Base Contract	-	-	-
1307.831E	VDQ	Base	Not Claimed- Base Contract	-	-	-
1307.831F	VDT	Base	Not Claimed- Base Contract	-	-	-
1307.831G	GMK	Base	Not Claimed- Base Contract	152,250	-	152,250

CB&I AREVA MOX Services, LLC.

Schedule 1.4

MFFF 2012 Rebaseline with Addendum Project Cost by Cost Account

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = [A]+[B]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
1307.831H	SCE	Base	Not Claimed- Base Contract		-	-
1307.831J	SMK	Base	Not Claimed- Base Contract	188,086	-	188,086
1307.831K	STK	Base	Not Claimed- Base Contract	166,743	-	166,743
1307.831L	SXE	Base	Not Claimed- Base Contract		-	-
1307.831M	TAS	Base	Not Claimed- Base Contract		-	-
1307.831N	TCL/TCK/TGJ	Base	Not Claimed- Base Contract		-	-
1307.831P	TCP	Base	Not Claimed- Base Contract	249,043	-	249,043
1307.831Q	TGM	Base	Not Claimed- Base Contract	26,121	-	26,121
1307.831R	TGV	Base	Not Claimed- Base Contract		-	-
1307.831S	Grp 5.1	Base	Not Claimed- Base Contract		-	-
1307.831T	Grp 5.2	Base	Not Claimed- Base Contract		-	-
1307.831U	Grp 5.3	Base	Not Claimed- Base Contract		-	-
1307.831X	Grp 5.6	Base	Not Claimed- Base Contract		-	-
1307.831Y	Grp 5.8 / LFX	Base	Not Claimed- Base Contract		-	-
1307.832A	KCB	Base	Not Claimed- Base Contract		-	-
1307.832B	KCD	Base	Not Claimed- Base Contract		-	-
1307.832C	KPA	Base	Not Claimed- Base Contract		-	-
1307.832D	KPB	Base	Not Claimed- Base Contract		-	-
1307.832E	KPC	Base	Not Claimed- Base Contract		-	-
1307.832F	KWD	Base	Not Claimed- Base Contract		-	-
1307.832G	KDA	Base	Not Claimed- Base Contract		-	-
1308.832A	KCB	Base	Not Claimed- Base Contract		-	-
1308.832B	KCD	Base	Not Claimed- Base Contract		-	-
1308.832C	KPA	Base	Not Claimed- Base Contract		-	-
1308.832D	KPB	Base	Not Claimed- Base Contract		-	-
1308.832E	KPC	Base	Not Claimed- Base Contract		-	-
1308.832F	KWD	Base	Not Claimed- Base Contract		-	-
1308.832G	KDA	Base	Not Claimed- Base Contract		-	-
1308.832H	Grp 5.4	Base	Not Claimed- Base Contract		-	-
1308.832J	Grp 5.5	Base	Not Claimed- Base Contract		-	-
1309.839C	DCP Design	Base	Not Claimed- Base Contract	1,509,027	-	1,509,027
1309.839D	SXE DCR 10-0422	Base	Not Claimed- Base Contract	175,664	-	175,664
1309.83KU	K Unit Pumps and Valves Design	Base	Not Claimed- Base Contract	2,048,230	-	2,048,230
1310.83JL	JLE and LTTA VAR	Base	Not Claimed- Base Contract	501,479	-	501,479
1310.83LB	Lab Unit Glovebox Design	Base	Not Claimed- Base Contract	4,692,873	-	4,692,873
1310.83LE	Laboratory Responsible Engineers and STRs	Base	Not Claimed- Base Contract	1,893,632	-	1,893,632
1310.83TS	Task Support Requests	Base	Not Claimed- Base Contract	606,129	-	606,129
1311.83MF	Multi Fuel Design - DCRs	Base	Not Claimed- Base Contract	1,091,946	-	1,091,946
1400.8401	SDG Base Contract Pre-FY 2003	Base	Not Claimed- Base Contract		-	-
1401.8402	Management	Base	Not Claimed- Base Contract	15,178,727	-	15,178,727
1401.8403	Support Services	Base	Not Claimed- Base Contract	16,693,729	-	16,693,729
1401.8404	SDG Travel & Relocation DCS	Base	Not Claimed- Base Contract	3,595,869	-	3,595,869
1401.8405	Facility Space, Utilities Supplies & Services	Base	Not Claimed- Base Contract	585,591	-	585,591
1401.8418	Design Reviews	Base	Not Claimed- Base Contract	421,952	-	421,952
1401.8419	PLC & Supervisor for Fire Safety	Base	Not Claimed- Base Contract		-	-
1402.8406	Platform Hardware & Maintenance	Base	Not Claimed- Base Contract	4,064,808	-	4,064,808
1402.8407	Platform Hardware & Maintenance - Aiken	Base	Not Claimed- Base Contract	9,885,980	-	9,885,980
1402.8408	SDG Procurement Engineering Support	Base	Not Claimed- Base Contract	2,118,987	-	2,118,987
1402.8410	Standards	Base	Not Claimed- Base Contract	6,652,081	-	6,652,081
1402.8411	Networks	Base	Not Claimed- Base Contract	846,427	-	846,427

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MFFF 2012 Rebaseline with Addendum Project Cost by Cost Account

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = [A]+[B]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
1402.8413	Laboratory Information Management System (LIMS)	Base	Not Claimed- Base Contract	2,159,452	-	2,159,452
1402.8414	Process PCs	Base	Not Claimed- Base Contract	2,715,494	-	2,715,494
1402.8417	RESERVED	Base	Not Claimed- Base Contract	-	-	-
1402.8477	PLC & Supervisor for Unit KWG	Base	Not Claimed- Base Contract	-	-	-
1402.8490	Simulation & Testing	Base	Not Claimed- Base Contract	3,516,527	-	3,516,527
1402.8497	CGD Embedded Software Evaluation Support	Base	Not Claimed- Base Contract	-	-	-
1403.8412	Manufacturing Management Information System (MMIS)	Base	Not Claimed- Base Contract	11,834,983	-	11,834,983
1404.8420	PLC's General	Base	Not Claimed- Base Contract	9,163,751	-	9,163,751
1404.8421	PLC & Supervisor for Unit DRS/DDP	Base	Not Claimed- Base Contract	317,978	-	317,978
1404.8422	PLC & Supervisor for Unit DCP/DCM	Base	Not Claimed- Base Contract	465,729	-	465,729
1404.8423	PLC & Supervisor for Unit DCE/NTP	Base	Not Claimed- Base Contract	542,483	-	542,483
1404.8424	PLC & Supervisor for Unit NDD	Base	Not Claimed- Base Contract	786,601	-	786,601
1404.8425	PLC & Supervisor for Unit NDP	Base	Not Claimed- Base Contract	1,075,897	-	1,075,897
1404.8426	PLC & Supervisor for Unit NBX/NBY	Base	Not Claimed- Base Contract	711,638	-	711,638
1404.8427	PLC & Supervisor for Unit NDS	Base	Not Claimed- Base Contract	1,036,479	-	1,036,479
1404.8428	PLC & Supervisor for Unit NXR	Base	Not Claimed- Base Contract	785,887	-	785,887
1404.8429	PLC & Supervisor for Unit NCR	Base	Not Claimed- Base Contract	803,389	-	803,389
1404.8430	PLC & Supervisor for Unit NTM	Base	Not Claimed- Base Contract	1,069,351	-	1,069,351
1404.8431	PLC & Supervisor for Unit NPE/NPF	Base	Not Claimed- Base Contract	1,530,655	-	1,530,655
1404.8432	PLC & Supervisor for Unit LTP	Base	Not Claimed- Base Contract	457,658	-	457,658
1404.8433	PLC & Supervisor for Unit PFE/PFF	Base	Not Claimed- Base Contract	1,351,119	-	1,351,119
1404.8434	PLC & Supervisor for Unit PRE/PRF	Base	Not Claimed- Base Contract	863,994	-	863,994
1404.8435	PLC & Supervisor for Unit PTE/PTF	Base	Not Claimed- Base Contract	976,017	-	976,017
1404.8436	PLC & Supervisor for Unit PQE	Base	Not Claimed- Base Contract	690,866	-	690,866
1404.8437	PLC & Supervisor for Unit PAD	Base	Not Claimed- Base Contract	717,963	-	717,963
1404.8438	PLC & Supervisor for Unit PAR	Base	Not Claimed- Base Contract	358,147	-	358,147
1404.8439	PLC & Supervisor for Unit PSE	Base	Not Claimed- Base Contract	509,018	-	509,018
1404.8440	PLC & Supervisor for Unit PSF	Base	Not Claimed- Base Contract	445,990	-	445,990
1404.8441	PLC & Supervisor for Unit PSI	Base	Not Claimed- Base Contract	699,084	-	699,084
1404.8442	PLC & Supervisor for Unit PSJ	Base	Not Claimed- Base Contract	346,367	-	346,367
1404.8443	PLC & Supervisor for Unit GME/GMF	Base	Not Claimed- Base Contract	2,391,966	-	2,391,966
1404.8444	PLC & Supervisor for Unit GMK	Base	Not Claimed- Base Contract	429,250	-	429,250
1404.8445	PLC & Supervisor for Unit GDE	Base	Not Claimed- Base Contract	382,174	-	382,174
1404.8446	PLC & Supervisor for Unit SXE	Base	Not Claimed- Base Contract	312,383	-	312,383
1404.8447	PLC & Supervisor for Unit SEK	Base	Not Claimed- Base Contract	501,346	-	501,346
1404.8448	PLC & Supervisor for Unit SDK	Base	Not Claimed- Base Contract	854,364	-	854,364
1404.8449	PLC & Supervisor for Unit SCE	Base	Not Claimed- Base Contract	389,985	-	389,985
1404.8450	PLC & Supervisor for Unit SMK/STK	Base	Not Claimed- Base Contract	444,178	-	444,178
1404.8451	PLC & Supervisor for Unit TGM	Base	Not Claimed- Base Contract	511,706	-	511,706
1404.8452	PLC & Supervisor for Unit TGV	Base	Not Claimed- Base Contract	76,311	-	76,311
1404.8453	PLC & Supervisor for Unit TAS	Base	Not Claimed- Base Contract	589,992	-	589,992
1404.8454	PLC & Supervisor for Unit TCK	Base	Not Claimed- Base Contract	216,548	-	216,548
1404.8455	PLC & Supervisor for Unit TCP	Base	Not Claimed- Base Contract	454,702	-	454,702
1404.8456	PLC & Supervisor for Unit TCL/TGJ	Base	Not Claimed- Base Contract	307,091	-	307,091
1404.8457	PLC & Supervisor for Unit TXE	Base	Not Claimed- Base Contract	-	-	-
1404.8458	PLC & Supervisor for Unit LCT	Base	Not Claimed- Base Contract	95,641	-	95,641
1404.8459	PLC & Supervisor for Unit VDQ	Base	Not Claimed- Base Contract	-	-	-
1404.8460	PLC & Supervisor for Unit VDT	Base	Not Claimed- Base Contract	383,623	-	383,623
1404.8461	PLC & Supervisor for Unit VDR/VDU	Base	Not Claimed- Base Contract	29,649	-	29,649
1404.8485	PLC & Supervisor for Fire Safety	Base	Not Claimed- Base Contract	42,505	-	42,505

CB&I AREVA MOX Services, LLC.

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MFFF 2012 Rebaseline with Addendum Project Cost by Cost Account

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = [A]+[B]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
1404.8486	PLC & Supervisor for LGF	Base	Not Claimed- Base Contract	305,291	-	305,291
1404.8487	M&I - PRE/PRF	Base	Not Claimed- Base Contract		-	-
1405.8462	PLC & Supervisor for Unit KDD	Base	Not Claimed- Base Contract	863,150	-	863,150
1405.8463	PLC & Supervisor for Unit KDA	Base	Not Claimed- Base Contract	1,813,250	-	1,813,250
1405.8464	PLC & Supervisor for Unit KDB	Base	Not Claimed- Base Contract	455,895	-	455,895
1405.8466	PLC & Supervisor for Unit KPA	Base	Not Claimed- Base Contract	926,538	-	926,538
1405.8467	PLC & Supervisor for Unit KPB	Base	Not Claimed- Base Contract	317,577	-	317,577
1405.8468	PLC & Supervisor for Unit KPC	Base	Not Claimed- Base Contract	391,037	-	391,037
1405.8469	PLC for Unit LFX	Base	Not Claimed- Base Contract	45,858	-	45,858
1405.8470	PLC & Supervisor for Unit KPG	Base	Not Claimed- Base Contract	650,175	-	650,175
1405.8471	PLC & Supervisor for Unit LLP	Base	Not Claimed- Base Contract	703,119	-	703,119
1405.8472	PLC & Supervisor for Unit KCA	Base	Not Claimed- Base Contract	481,004	-	481,004
1405.8473	PLC & Supervisor for Unit KCB	Base	Not Claimed- Base Contract	714,164	-	714,164
1405.8474	PLC & Supervisor for Unit KCC	Base	Not Claimed- Base Contract	545,313	-	545,313
1405.8475	PLC & Supervisor for Unit KCD	Base	Not Claimed- Base Contract	395,510	-	395,510
1405.8476	PLC & Supervisor for Unit KWD	Base	Not Claimed- Base Contract	336,167	-	336,167
1405.8477	PLC & Supervisor for Unit KWG	Base	Not Claimed- Base Contract	373,415	-	373,415
1405.8478	PLC & Supervisor for Unit KDM	Base	Not Claimed- Base Contract	2,322,500	-	2,322,500
1405.8480	PLC & Sup. for Unit KUA/KUB/KUD/KUG/KUH	Base	Not Claimed- Base Contract	567,817	-	567,817
1405.8481	PLC & Supervisor for Ventilation	Base	Not Claimed- Base Contract	1,090,387	-	1,090,387
1405.8482	PLC & Supervisor for Electrical Distribution	Base	Not Claimed- Base Contract	513,569	-	513,569
1405.8483	PLC & Supervisor for Fluids	Base	Not Claimed- Base Contract	656,234	-	656,234
1405.8484	PLC & Supervisor for Unit KDR	Base	Not Claimed- Base Contract	53,068	-	53,068
1405.8486	PLC & Supervisor for LGF	Base	Not Claimed- Base Contract		-	-
1405.8490	Simulation & Testing	Base	Not Claimed- Base Contract		-	-
1405.8494	Independent Software Verification & Validation	Base	Not Claimed- Base Contract		-	-
1405.8496	SPLC Procurement Contract Oversight	Base	Not Claimed- Base Contract	12,237,107	-	12,237,107
1405.8497	CGD Embedded Software Evaluation Support	Base	Not Claimed- Base Contract	662,001	-	662,001
1406.8419	Software Analysis & Translation	Base	Not Claimed- Base Contract	2,911,871	-	2,911,871
1407.8409	PLC & Supervisor for Fire Safety	Base	Not Claimed- Base Contract		-	-
Base Subtotal				\$ 1,040,669,658	\$ 10,080,547	\$ 1,050,750,205
MFFF Project Total				\$ 6,328,584,918	\$ 285,916,668	\$ 6,614,501,585

Sources:

[A] May 2007 PRISM Data adjusted for budget transfers between July 2007 and September 2012

[B] 2012 contract proposal value as stated in December 2012 PRISM data and adjusted for 2012 Rebaseline Addendums

[C] Calculated

CB&I AREVA MOX Services, LLC.
MFFF Project Cost by Trend

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Trend ⁽¹⁾	Cost Account	Cost Account Description	Contract	Claim Category	2012 Rebaseline Addendum ⁽¹⁾
EAC 12-0761A	1504.8541	Supervision / Admin	Option 1	Construction Management	\$ 4,043,003
Subtotal					\$ 4,043,003
EAC 12-0762A	1728.2801	Yard Electrical & Lighting	Option 1	MFFF Construction - Installation/Materials	\$ 1,001,856
EAC 12-0762A	1741.4180	Electrical	Option 1	MFFF Construction - Installation/Materials	7,957,015
EAC 12-0762A	1742.4280	Electrical	Option 1	MFFF Construction - Installation/Materials	5,113,742
EAC 12-0762A	1743.4380	Electrical	Option 1	MFFF Construction - Installation/Materials	4,472,321
EAC 12-0762A	1751.5180	Electrical	Option 1	MFFF Construction - Installation/Materials	2,413,665
EAC 12-0762A	1752.5280	Electrical	Option 1	MFFF Construction - Installation/Materials	1,869,083
EAC 12-0762A	1753.5380	Electrical	Option 1	MFFF Construction - Installation/Materials	2,622,067
EAC 12-0762A	1754.5480	Electrical	Option 1	MFFF Construction - Installation/Materials	2,078,460
EAC 12-0762A	1755.5580	Electrical	Option 1	MFFF Construction - Installation/Materials	439,431
EAC 12-0762A	1761.6180	Electrical	Option 1	MFFF Construction - Installation/Materials	1,032,629
EAC 12-0762A	1762.6280	Electrical	Option 1	MFFF Construction - Installation/Materials	470,823
EAC 12-0762A	1763.6380	Electrical	Option 1	MFFF Construction - Installation/Materials	377,760
EAC 12-0762A	1771.7180	Electrical	Option 1	MFFF Construction - Installation/Materials	139,719
EAC 12-0762A	1774.7420	Bulk Cable for MFFF Construction	Option 1	MFFF Construction - Installation/Materials	2,935,805
EAC 12-0762A	1774.7432	Electrical Material and Other Miscellaneous Labor Acct	Option 1	MFFF Construction - Installation/Materials	16,741,316
EAC 12-0762A	1774.7445	Craft Orientation & Training	Option 1	MFFF Construction - Installation/Materials	1,908,070
Subtotal					\$ 51,573,762
EAC 12-0763A	1736.3653	Mechanical / Piping	Option 1	MFFF Construction - Installation/Materials	\$ 602,200
EAC 12-0763A	1736.3656	Emerg.Diesel Gen.System/Equipment	Option 1	MFFF Construction - Installation/Materials	270,645
Subtotal					\$ 872,845
EAC 12-0764A	1741.4130	MOX Processing Area (BMP) – MOX Processing Area – Level 1 – Fire Pro	Option 1	MFFF Construction - Installation/Materials	\$ (139,560)
EAC 12-0764A	1742.4230	MOX Processing Area (BMP) – MOX Processing Area – Level 2 – Fire Pro	Option 1	MFFF Construction - Installation/Materials	87,277
EAC 12-0764A	1743.4330	MOX Processing Area (BMP) – MOX Processing Area – Level 3 – Fire Pro	Option 1	MFFF Construction - Installation/Materials	417,575
EAC 12-0764A	1751.5130	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 1 –	Option 1	MFFF Construction - Installation/Materials	113,711
EAC 12-0764A	1752.5230	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 2 –	Option 1	MFFF Construction - Installation/Materials	32,491
EAC 12-0764A	1753.5330	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 3 –	Option 1	MFFF Construction - Installation/Materials	110,733
EAC 12-0764A	1754.5430	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 4 –	Option 1	MFFF Construction - Installation/Materials	132,878
EAC 12-0764A	1755.5530	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 5 –	Option 1	MFFF Construction - Installation/Materials	157,060
EAC 12-0764A	1761.6130	Shipping and Receiving Area (BSR) – Shipping and Receiving Area – Le	Option 1	MFFF Construction - Installation/Materials	117,757
EAC 12-0764A	1762.6230	Shipping and Receiving Area (BSR) – Shipping and Receiving Area – Le	Option 1	MFFF Construction - Installation/Materials	366,313
EAC 12-0764A	1763.6330	Shipping and Receiving Area (BSR) – Shipping and Receiving Area – Le	Option 1	MFFF Construction - Installation/Materials	183,030
EAC 12-0764A	1774.7454	Bulk Procurement - Material	Option 1	MFFF Construction - Installation/Materials	(154,104)
EAC 12-0764A	1774.7455	Distributable - Subcontract	Option 1	MFFF Construction - Installation/Materials	464,411
Subtotal					\$ 1,889,572
EAC 12-0766A	1741.4120	HVAC	Option 1	MFFF Construction - Installation/Materials	\$ 11,748,772
EAC 12-0766A	1742.4220	HVAC	Option 1	MFFF Construction - Installation/Materials	(100,216)
EAC 12-0766A	1743.4320	HVAC	Option 1	MFFF Construction - Installation/Materials	1,394,065

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MFFF Project Cost by Trend

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Trend ⁽¹⁾	Cost Account	Cost Account Description	Contract	Claim Category	2012 Rebaseline Addendum ⁽¹⁾
EAC 12-0766A	1744.4420	HVAC	Option 1	MFFF Construction - Installation/Materials	1,827,158
EAC 12-0766A	1751.5120	HVAC	Option 1	MFFF Construction - Installation/Materials	3,194,256
EAC 12-0766A	1752.5220	HVAC	Option 1	MFFF Construction - Installation/Materials	1,359,260
EAC 12-0766A	1753.5320	HVAC	Option 1	MFFF Construction - Installation/Materials	1,168,362
EAC 12-0766A	1754.5420	HVAC	Option 1	MFFF Construction - Installation/Materials	590,359
EAC 12-0766A	1755.5520	HVAC	Option 1	MFFF Construction - Installation/Materials	3,172,482
EAC 12-0766A	1761.6120	HVAC	Option 1	MFFF Construction - Installation/Materials	(1,517,885)
EAC 12-0766A	1762.6220	HVAC	Option 1	MFFF Construction - Installation/Materials	(488,132)
EAC 12-0766A	1763.6320	HVAC	Option 1	MFFF Construction - Installation/Materials	(200,037)
EAC 12-0766A	1771.7120	HVAC	Option 1	MFFF Construction - Installation/Materials	(758,583)
EAC 12-0766A	1774.7424	Distributables - Bulk Commodity - HVAC	Option 1	MFFF Construction - Installation/Materials	(219,319)
EAC 12-0766A	1774.7435	Distributables - HVAC Equipment	Option 1	MFFF Construction - Installation/Materials	27,029,537
EAC 12-0766A	1774.7440	Support Building for the Fabrication of Supports on Site Specific to	Option 1	MFFF Construction - Installation/Materials	22,833,613
Subtotal					\$ 71,033,692
EAC 12-0766B	1741.4120	HVAC	Option 1	MFFF Construction - Installation/Materials	\$ (404,144)
EAC 12-0766B	1742.4220	HVAC	Option 1	MFFF Construction - Installation/Materials	733,809
EAC 12-0766B	1743.4320	HVAC	Option 1	MFFF Construction - Installation/Materials	980,947
EAC 12-0766B	1744.4420	HVAC	Option 1	MFFF Construction - Installation/Materials	296,014
EAC 12-0766B	1761.6120	HVAC	Option 1	MFFF Construction - Installation/Materials	1,383,724
EAC 12-0766B	1762.6220	HVAC	Option 1	MFFF Construction - Installation/Materials	163,990
EAC 12-0766B	1763.6320	HVAC	Option 1	MFFF Construction - Installation/Materials	1,086,680
EAC 12-0766B	1771.7120	HVAC	Option 1	MFFF Construction - Installation/Materials	1,072,294
EAC 12-0766B	1774.7424	Distributables - Bulk Commodity - HVAC	Option 1	MFFF Construction - Installation/Materials	(135,000)
EAC 12-0766B	1774.7435	Distributables - HVAC Equipment	Option 1	MFFF Construction - Installation/Materials	(5,083,702)
EAC 12-0766B	1774.7440	Support Building for the Fabrication of Supports on Site Specific to	Option 1	MFFF Construction - Installation/Materials	(94,612)
Subtotal					\$ -
EAC 12-0767A	1741.4190	Instrumentation	Option 1	MFFF Construction - Installation/Materials	\$ 470,592
EAC 12-0767A	1742.4290	Instrumentation	Option 1	MFFF Construction - Installation/Materials	56,180
EAC 12-0767A	1743.4390	Instrumentation	Option 1	MFFF Construction - Installation/Materials	6,099,305
EAC 12-0767A	1752.5290	Instrumentation	Option 1	MFFF Construction - Installation/Materials	56,180
EAC 12-0767A	1753.5390	Instrumentation	Option 1	MFFF Construction - Installation/Materials	56,180
EAC 12-0767A	1755.5590	Instrumentation	Option 1	MFFF Construction - Installation/Materials	6,092,808
EAC 12-0767A	1761.6190	Instrumentation	Option 1	MFFF Construction - Installation/Materials	434,053
EAC 12-0767A	1763.6390	Instrumentation	Option 1	MFFF Construction - Installation/Materials	377,873
EAC 12-0767A	1774.7433	Instrumentation & Controls Material	Option 1	MFFF Construction - Installation/Materials	(1,923,606)
Subtotal					\$ 11,719,567
EAC 12-0768A	1741.4170	Other Equipment	Option 1	MFFF Construction - Installation/Materials	\$ 775,159
EAC 12-0768A	1751.5140	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	5,000
EAC 12-0768A	1751.5150	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	1,739,865
EAC 12-0768A	1751.5170	Other Equipment	Option 1	MFFF Construction - Installation/Materials	173,825

CB&I AREVA MOX Services, LLC.
MFFF Project Cost by Trend

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Trend ⁽¹⁾	Cost Account	Cost Account Description	Contract	Claim Category	2012 Rebaseline Addendum ⁽¹⁾
EAC 12-0768A	1752.5250	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	3,818,859
EAC 12-0768A	1753.5350	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	342,275
EAC 12-0768A	1754.5440	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	245,523
EAC 12-0768A	1754.5450	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	175,740
EAC 12-0768A	1755.5540	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	51,150
EAC 12-0768A	1755.5550	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	252,872
EAC 12-0768A	1761.6170	Other Equipment	Option 1	MFFF Construction - Installation/Materials	45,698
EAC 12-0768A	1774.7429	Distributables - Bulk Commodity - Stainless Steel Ball Valves	Option 1	MFFF Construction - Installation/Materials	1,603,495
EAC 12-0768A	1774.7434	Chemical Equipment	Option 1	MFFF Construction - Installation/Materials	294,652
EAC 12-0768A	1774.7438	Mechanical Equipment	Option 1	MFFF Construction - Installation/Materials	37,750,262
EAC 12-0768A	1774.7439	Consumable & Expendable Materials Specific to CP-27 – BAP Chemical P	Option 1	MFFF Construction - Installation/Materials	20,717,334
Subtotal					\$ 67,991,707
EAC 12-0768B	1751.5150	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	\$ 53,922
EAC 12-0768B	1752.5250	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	(52,926)
EAC 12-0768B	1754.5450	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	(996)
Subtotal					\$ -
EAC 12-0773A	1802.8820	Supplies & Services	Option 1	Hotel Load	\$ 1,812,630
Subtotal					\$ 1,812,630
EAC 12-0774B	0115.1504	Mechanical Programs	Base	Hotel Load	\$ 47,486
EAC 12-0774B	0115.1504	Mechanical Programs	Base		1,034,405
EAC 12-0774B	0115.1513	Plant MFFF Construction - Installation/Materials System	Base		450,617
EAC 12-0774B	1000.8006	Engineering Training	Option 1	Hotel Load	174,341
EAC 12-0774B	1001.8011	Business Travel	Option 1	Hotel Load	42,205
EAC 12-0774B	1001.8012	Temporary Assignments	Option 1	Hotel Load	221,219
EAC 12-0774B	1001.8019	Other ODCs	Option 1	Hotel Load	(1,691,356)
EAC 12-0774B	1003.8032	Civil / Structural	Option 1	MFFF Construction - Title III Engineering	318,356
EAC 12-0774B	1003.8032	Civil / Structural	Option 1	Hotel Load	955,412
EAC 12-0774B	1003.8034	Electrical / I&C Site Construction Support	Option 1	Hotel Load	1,308,749
EAC 12-0774B	1003.8035	Chemical-Construction Support	Option 1	Hotel Load	7,645
EAC 12-0774B	1003.8036	Mechanical – Construction Support	Option 1	Hotel Load	146,388
EAC 12-0774B	1003.8038	Engineering Mechanics - Site Construction Support	Option 1	Hotel Load	5,949,091
EAC 12-0774B	1004.8044	Electrical / I&C Procurement and Fabrication Support	Option 1	Hotel Load	37,044
EAC 12-0774B	1004.8046	Chemical-Procurement/Fabrication Support	Option 1	Hotel Load	230,243
EAC 12-0774B	1004.8049	Equipment Qualification	Option 1	Hotel Load	98,322
EAC 12-0774B	1005.8053	Electrical / IC Startup and Operations Support	Option 1	Hotel Load	29,240
EAC 12-0774B	1006.8052	Process Unit Responsible Engineer Startup Support	Option 1	Hotel Load	30,597
EAC 12-0774B	1212.8292	Commercial Grade Dedication (CGD)	Base	Hotel Load	2,071,902
EAC 12-0774B	1212.8293	Chemical/Mechanical Subcontract Technical Representatives (STRs) and	Base	Hotel Load	3,755,396
EAC 12-0774B	1212.8294	Electrical/I&C Procurements Engineering	Base	Hotel Load	2,720,741
Subtotal					\$ 17,938,043

CB&I AREVA MOX Services, LLC.
MFFF Project Cost by Trend

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Trend ⁽¹⁾	Cost Account	Cost Account Description	Contract	Claim Category	2012 Rebaseline Addendum ⁽¹⁾
EAC 12-0775A	1701.8701	KCB - Homogenization - Sampling	Option 1	Process Units	\$ (2,300)
EAC 12-0775A	1701.8702	KCC - PuO2 Decanning	Option 1	Process Units	(2,448)
EAC 12-0775A	1701.8703	KDA - PUO2 Decanning	Option 1	Process Units	1,425,471
EAC 12-0775A	1701.8704	KDM - Pre-Polishing Milling	Option 1	Process Units	4,207,320
EAC 12-0775A	1701.8705	KDR - Recanning	Option 1	Process Units	(79)
EAC 12-0775A	1701.8706	KPA GB 4010	Option 1	Process Units	(110,492)
EAC 12-0775A	1701.8777	KPG - Sampling Automatic	Option 1	Process Units	736,722
EAC 12-0775A	1702.8707	KCB 5000 Manufacturing	Option 1	Process Units	(49,369)
EAC 12-0775A	1703.8715	DCM - PuO2 3013 Storage	Option 1	Process Units	910,079
EAC 12-0775A	1703.8716	DCP - PuO2 Receiving	Option 1	Process Units	735,048
EAC 12-0775A	1703.8717	KDA - PUO2 Decanning (EQ - 6000 Density Measurement)	Option 1	Process Units	102,015
EAC 12-0775A	1704.8720	SDK - Rod Inspection and Sorting	Option 1	Process Units	2,759
EAC 12-0775A	1704.8721	SEK - Helium Leak Test	Option 1	Process Units	220,756
EAC 12-0775A	1705.8722	GMK - Rod Tray Loading	Option 1	Process Units	35,886
EAC 12-0775A	1705.8723	SCE - Rod Scanning	Option 1	Process Units	156,557
EAC 12-0775A	1705.8724	SMK - Rod Tray Handling	Option 1	Process Units	437,502
EAC 12-0775A	1705.8725	STK - Rod Storage	Option 1	Process Units	204,924
EAC 12-0775A	1705.8726	SXE - X Ray Inspection	Option 1	Process Units	164,450
EAC 12-0775A	1705.8727	TAS - Assembly Handling and Storage	Option 1	Process Units	612,163
EAC 12-0775A	1705.8728	TCK - Assembly Dry Cleaning	Option 1	Process Units	(85,910)
EAC 12-0775A	1705.8729	TCL - Assembly Final Inspection	Option 1	Process Units	86,862
EAC 12-0775A	1705.8731	TCP - Assembly Dismensional Inspection	Option 1	Process Units	(8,584)
EAC 12-0775A	1705.8732	TGM - Assembly Mockup Loading	Option 1	Process Units	107,270
EAC 12-0775A	1705.8733	TGV - Assembly Mounting	Option 1	Process Units	55,824
EAC 12-0775A	1706.8734	PSE - Green Pellet Storage	Option 1	Process Units	(245,815)
EAC 12-0775A	1706.8735	PSF - Sintering Pellet Storage	Option 1	Process Units	(389,812)
EAC 12-0775A	1706.8736	PSI - Scrap Pellet Storage	Option 1	Process Units	(340,288)
EAC 12-0775A	1706.8737	PSJ - Ground & Sorted Pellet Storage	Option 1	Process Units	723,484
EAC 12-0775A	1707.8738	Lab Equip - LRD/LPG/LBT/LAC/KLN/KLL/KLK/KLH	Option 1	Process Units	985,833
EAC 12-0775A	1707.8739	Lab Equip - LME/LAU/FLT	Option 1	Process Units	550,206
EAC 12-0775A	1707.8740	Lab Equip - LSR/LCP/KLJ	Option 1	Process Units	1,944,369
EAC 12-0775A	1707.8741	Lab Equip - LPS/LET/LER/LDS/KLM/KLF/KLB/KLC/KLD	Option 1	Process Units	2,224,365
EAC 12-0775A	1707.8742	Lab Equip - KLO/KLI/KLG/KLA/KLE	Option 1	Process Units	1,411,224
EAC 12-0775A	1707.8744	Lab Equip - LFX	Option 1	Process Units	227,001
EAC 12-0775A	1708.8745	DCE - PUO2 Buffer Storage	Option 1	Process Units	834,042
EAC 12-0775A	1708.8746	GDE - Rod Decladding	Option 1	Process Units	938,414
EAC 12-0775A	1708.8747	GME - Rod Cladding and Decontamination	Option 1	Process Units	1,621,347
EAC 12-0775A	1708.8748	PAD - Preplanning	Option 1	Process Units	17,801
EAC 12-0775A	1708.8749	PAR - Preplanning	Option 1	Process Units	(15,095)
EAC 12-0775A	1708.8750	PML - Pellet Handling	Option 1	Process Units	3,107,163
EAC 12-0775A	1708.8751	PQE - Quality Control & Manual Sorting	Option 1	Process Units	3,235,272
EAC 12-0775A	1708.8752	PRE - Pellet Grinding	Option 1	Process Units	(16,839)

CB&I AREVA MOX Services, LLC.
MFFF Project Cost by Trend

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Trend ⁽¹⁾	Cost Account	Cost Account Description	Contract	Claim Category	2012 Rebaseline Addendum ⁽¹⁾
EAC 12-0775A	1708.8753	PRF - Pellet Grinding	Option 1	Process Units	337,726
EAC 12-0775A	1708.8754	PTE - Pellet Inspection & Sorting	Option 1	Process Units	(3,310)
EAC 12-0775A	1708.8755	PTF - Pellet Inspection & Sorting	Option 1	Process Units	296,665
EAC 12-0775A	1709.8756	DDP - UO2 Drum Emptying	Option 1	Process Units	709,672
EAC 12-0775A	1709.8757	LCT - Test Line (part of laboratory)	Option 1	Process Units	454,130
EAC 12-0775A	1709.8758	NBX - Primary Blend Ball Milling	Option 1	Process Units	312,996
EAC 12-0775A	1709.8759	NBY - Scrap Ball Milling	Option 1	Process Units	567,828
EAC 12-0775A	1709.8760	NCR - Scrap Processing	Option 1	Process Units	2,469,813
EAC 12-0775A	1709.8761	NDD - PUO2 Can Receiving and Emptying	Option 1	Process Units	645,475
EAC 12-0775A	1709.8762	NDP - Primary Dosing	Option 1	Process Units	3,803,209
EAC 12-0775A	1709.8763	NDS - Final Dosing	Option 1	Process Units	4,364,668
EAC 12-0775A	1709.8764	NTM - Jar Storage and Handling	Option 1	Process Units	9,085,523
EAC 12-0775A	1709.8765	NXR - Powder Auxiliary	Option 1	Process Units	1,975,494
EAC 12-0775A	1710.8766	NPG - Homogenization & Pelletizing	Option 1	Process Units	1,184,650
EAC 12-0775A	1710.8767	NPH - Homogenization & Pelletizing	Option 1	Process Units	1,210,439
EAC 12-0775A	1710.8768	NPI - Homogenization & Pelletizing	Option 1	Process Units	(832)
EAC 12-0775A	1711.8769	KLA - Precipitation - Filtration - Oxidation	Option 1	Process Units	387,460
EAC 12-0775A	1711.8770	KCB GB1000 - Homogenization - Sampling	Option 1	Process Units	279,260
EAC 12-0775A	1711.8771	KDA - PUO2 Decanning	Option 1	Process Units	239,438
EAC 12-0775A	1711.8772	KDB - Dissolution	Option 1	Process Units	1,199,060
EAC 12-0775A	1711.8773	KDD - Dissolution of Chlorinated Feed	Option 1	Process Units	2,356,166
EAC 12-0775A	1711.8774	KDM - Pre-Polishing Milling (GB6400/7400)	Option 1	Process Units	375,657
EAC 12-0775A	1711.8775	KPA GB4000	Option 1	Process Units	882,101
EAC 12-0775A	1711.8776	KPB GB1000	Option 1	Process Units	368,014
EAC 12-0775A	1711.8778	LLP - Pneumatic Transfer (33mm, PUO2 cans) Equipment	Option 1	Process Units	539,478
EAC 12-0775A	1711.8779	LTP - Pneumatic Transfer (76mm, PUO2 cans) Equipment	Option 1	Process Units	162,870
EAC 12-0775A	1711.8780	NTP - Pneumatic Transfer (133mm, PUO2 cans) Equipment	Option 1	Process Units	273,997
EAC 12-0775A	1712.8782	PFE/PFF - Sintering Furnace	Option 1	Process Units	6,288,048
EAC 12-0775A	1712.8783	TXE - Assembly Packaging	Option 1	Process Units	68,235
EAC 12-0775A	1714.8708	KCD - Oxalic Mother Liquors Recovery Unit	Option 1	Process Units	(2,898)
EAC 12-0775A	1714.8709	KPA (GB2000, 2010, 3000, 8000, 8510) Purification Cycle	Option 1	Process Units	119,541
EAC 12-0775A	1714.8710	KPC - Nitric Acid Recovery Liquid Ring Pump GB	Option 1	Process Units	27,060
EAC 12-0775A	1714.8711	KWD - Aqueous Waste Reception	Option 1	Process Units	36,314
EAC 12-0775A	1714.8714	KPB (GB2000) Solvent Recovery Unit	Option 1	Process Units	28,505
EAC 12-0775A	1715.8719	VDT Waste Nuclear Count - Drum Hdling & NDA P	Option 1	Process Units	299,190
EAC 12-0775A	1716.8795	Long Lead Procurements	Option 1	Process Units	1,933,293
EAC 12-0775A	1717.8799	REA Exposure	Option 1	Process Units	(22,390,845)
Subtotal					\$ 47,639,186
EAC 12-0775B	1711.8769	KLA - Precipitation - Filtration - Oxidation	Option 1	Process Units	\$ (30,861)
EAC 12-0775B	1711.8772	KDB - Dissolution	Option 1	Process Units	(55,585)
EAC 12-0775B	1711.8773	KDD - Dissolution of Chlorinated Feed	Option 1	Process Units	(245,166)
EAC 12-0775B	1711.8778	LLP - Pneumatic Transfer (33mm, PUO2 cans) Equipment	Option 1	Process Units	(9,175)

CB&I AREVA MOX Services, LLC.
MFFF Project Cost by Trend

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Trend ⁽¹⁾	Cost Account	Cost Account Description	Contract	Claim Category	2012 Rebaseline Addendum ⁽¹⁾
EAC 12-0775B	1711.8779	LTP - Pneumatic Transfer (76mm, PUO2 cans) Equipment	Option 1	Process Units	(39,406)
EAC 12-0775B	1711.8780	NTP - Pneumatic Transfer (133mm, PUO2 cans) Equipment	Option 1	Process Units	(138,817)
Subtotal					\$ (519,010)
EAC 12-0775C	1711.8769	KLA - Precipitation - Filtration - Oxidation	Option 1	Process Units	\$ 1,071,086
EAC 12-0775C	1711.8772	KDB - Dissolution	Option 1	Process Units	723,341
EAC 12-0775C	1711.8773	KDD - Dissolution of Chlorinated Feed	Option 1	Process Units	2,293,511
EAC 12-0775C	1711.8778	LLP - Pneumatic Transfer (33mm, PUO2 cans) Equipment	Option 1	Process Units	233,274
EAC 12-0775C	1711.8779	LTP - Pneumatic Transfer (76mm, PUO2 cans) Equipment	Option 1	Process Units	(16,846)
EAC 12-0775C	1711.8780	NTP - Pneumatic Transfer (133mm, PUO2 cans) Equipment	Option 1	Process Units	(436,338)
Subtotal					\$ 3,868,028
EAC 12-0779A	1600.8601	Management / Admin	Option 1	Process Units	\$ 1,273,387
EAC 12-0779A	1600.8602	Project Controls	Option 1	Process Units	611,276
EAC 12-0779A	1601.8611	Business Travel	Option 1	Process Units	601,395
Subtotal					\$ 2,486,058
EAC 12-0788	1901.6023	Quality Control Projects	Option 1	QA	\$ 2,869,622
Subtotal					\$ 2,869,622
EAC 12-0794	9009.0903	DOE Tech Spt. (Non-MOX Services Cost)	Option 1		\$ 547,917 ⁽²⁾
Subtotal					\$ 547,917
EAC 12-0807A	1737.3753	Mechanical / Piping	Option 1	MFFF Construction - Installation/Materials	\$ 150,046
Subtotal					\$ 150,046
Grand Total					\$ 285,916,668 ⁽³⁾

Sources:

(1) Change Log by Work Package Dec. 2012- June 2014

Notes:

(1) Trends associated with the 2012 Rebaseline Addendum were identified by MOX Services personnel and described as related to the Addendum within the individual Trends and the Monthly Reports.

(2) Trend EAC 12-0794 detail includes budgeted costs for FY 2013 in the amount of \$5,098,293 that was not incorporated into the Trend or loaded into PRISM.

(3) The May 2013 Monthly Status Report notes "[t]he current EAC incorporates an additional \$291 million from the addendum to BCP 12-121..." The \$291 million appears to include \$5,098,293 for funding in FY 2013 for MA 90 from Trend EAC 12-0794 that was not loaded into PRISM or incorporated into the EAC.

II. CONTRACT BACKGROUND, CHANGES, AND RISKS SPECIFICALLY ACCEPTED BY NNSA

Concerned with the growing threat of nuclear proliferation after the Cold War, the United States and Russia agreed in the early 1990s to reduce their stockpiles of weapons-grade plutonium. In 2000, the countries formalized this agreement in the PMDA, where each nation agreed to dispose of no less than 34 metric tons of plutonium.¹ To the extent practicable, the Russian and American plutonium disposition programs were to proceed in parallel.²

As the United States was negotiating the PMDA, it also analyzed various disposition methods for its surplus plutonium, ultimately determining to build a first-of-a-kind mixed oxide fuel fabrication facility at the Savannah River Site in South Carolina. The Project would be designed to mix the surplus plutonium with depleted uranium oxide to form mixed oxide fuel to generate nuclear power.

Although the Project would be based on then 20-year old MOX technology developed in France and used at the MELOX and La Hague plants, it has many unique features that increase its complexity. Among other things, the Project would start with weapons-grade plutonium, not spent fuel as the French reference plants do; it would combine the separate aqueous processing and MOX fuel fabrication processes into one plant; and it would be subject to U.S. quality, safety and security standards and regulations. The MOX Project would be regulated and licensed by the NRC.

In March 1999, DOE awarded the Contract for the U.S. MFFF to the predecessor in interest to MOX Services. The Contract was awarded on a cost-reimbursement basis and was structured as a base contract with a series of options. The base contract covered the design of the Project, and Option 1 was for the construction and cold start-up of the facility. This Claim addresses only MOX Services' entitlement to incentive fee under Option 1.

A. MOX Services' Option 1 Proposal

In March 2006 MOX Services submitted its Option 1 Proposal. It proposed to start construction in September 2006, to complete construction in July 2012, and to complete cold start-up in August 2013. A year later, in April 2007, DOE approved the Critical Decision 2 performance baseline ("2007 Baseline"), and Critical Decision 3, the start of construction.

¹ Agreement Between the Government of the United States of America and the Government of the Russian Federation Concerning the Management and Disposition of Plutonium Designated as No Longer Required for Defense Purposes and Related Cooperation (2000) ("PMDA"), art. II, ¶ 1. ("Exhibit 5").

² *Id.* at art. II, ¶ 3.

DOE authorized MOX Services to begin construction on August 1, 2007. Critical Decision 2/3 set a TPC of \$4.8 billion, and scheduled completion for September 2016.³

In May 2008, the Option 1 contract was definitized in the amount of \$2,677,801,149,⁴ of which \$2,526,227,501 was estimated costs and \$151,573,648 was fee.⁵ The Option 1 contract also acknowledged that while the Management Reserve was not yet definitized (a \$150,000,000 placeholder was used), the adjusted TPC would be increased by the amount of the agreed-upon Management Reserve.

Beyond the sheer scale and technical complexity of the Project, the MFFF has been especially challenging politically since well before Option 1. Internationally, Russia was slow to demonstrate its commitment to meeting the PMDA's requirements, and, consequently, DOE exerted a drag on MOX Services' performance. For example, DOE restricted MOX Services' ability to engage with potential process unit vendors to tap their engineering expertise, and DOE refused to allow MOX Services to conduct planned and requested procurement actions even though MOX Services was not making financial commitments.

In the domestic realm, the Project's technical challenges have been exacerbated by trends in the nuclear industry generally. The Three Mile Island incident precipitated a great downturn in domestic nuclear construction, and the industry has begun to rebound in earnest only in the past decade. MOX Services has discovered that potential subcontractors' capabilities to operate under the NRC's regulatory regime has atrophied, and that truly nuclear-project-capable subcontractors now are in high demand and represent only a small percentage of the industry. Moreover, the unprecedented nature of the Project has made potential subcontractors leery of bidding on large fixed-price contracts. Combined, these forces have severely hampered MOX Services' ability to construct the Project in the manner envisioned by DOE at the start of Option 1. Many of these forces were identified in the MOX Services proposal, which expressly assumed that these potential challenges would not impact the Project cost or schedule.

Later in the Option 1 period, the Project has been beset by funding difficulties. The Project Execution Plan had been designed to increase spending to support the deployment of an enormous amount of craft labor needed to install the many systems (electrical, HVAC, fire suppression, gas and liquids piping, controls, etc.) the MFFF requires once the structure

³ See Letter NA-07-046 from Clay H. Ramsey, Federal Project Director, NNSA to Dave Stinson, President and Project Manager, Shaw AREVA MOX Services, LLC (April 24, 2007). ("Exhibit 6").

⁴ This amount does not include \$798,405,507 for the Base Contract or the \$77,477,626 for the Early Option 1 (CD 2/3, Site Prep, CP-20). See Contract DE-AC02-99CH1088, Modification No. 124 (May 20, 2008) ("Mod 124") at B.2. ("Exhibit 7").

⁵ Under Modification 124, fee was equal to 7% of the estimated costs, with the last percentage point contingent upon the exercise of Option 2.

was completed. When that time came, however, NNSA failed to provide adequate funding, and later, the Agency reduced funding even more and failed to provide a full funding profile to project completion that was required to finish MFFF construction.

In sum, completing the construction and cold start-up phase of the Project will take significantly more resources and time than the parties estimated at the beginning of Option 1.

B. 2012 Rebaseline Proposal

By 2012, the Project's estimated cost and schedule to complete had increased substantially. In 2011 and early 2012 MOX Services submitted numerous REAs which detailed many of the issues contained in this Claim. However, NNSA did not act on many of these Requests. In January 2012, NNSA directed MOX Services to prepare a rebaseline proposal,⁶ and in June 2012, NNSA provided a constrained funding profile.⁷ In September 2012, MOX Services submitted BCP 12-121, the precursor to its submission of the 2012 Rebaseline the following month. The 2012 Rebaseline was updated through an Addendum in May 2013.

The 2012 Rebaseline proposal updated cost and Project schedule projections. MOX Services estimated a new completion date of November 30, 2018 without schedule contingency, and provided a supporting Project schedule. The 2012 Rebaseline proposed increasing the estimated cost of construction, CLIN 002, to \$6,352,406,548.⁸ This cost estimate was based on actual costs incurred through May 2012 and estimates through completion.

NNSA initially stated that "[t]he overall BCP is of very high quality and meets the requirements."⁹ However, approval of the 2012 Rebaseline ultimately stalled as the Defense Contract Audit Agency ("DCAA") was unable to complete an adequacy review.¹⁰ The

⁶ See Letter COR-SRSOCABM-1.19.2012-412183, from Robert Swett, Contracting Officer, NNSA, to Paul Wittingham, Contracts Manager, Shaw AREVA MOX Services, LLC (January 19, 2012). ("Exhibit 8").

⁷ See Letter COR-SRSOCABM-6.29.2012-449690, from Carol Elliot, Contracting Officer, NNSA, to Paul Wittingham, Contracts Manager, Shaw AREVA MOX Services, LLC, (June 29, 2012) ("June 29 Letter"). ("Exhibit 9").

⁸ Contract Proposal 12-004, MOX Project Rebaseline (Oct. 31, 2012) ("Proposal 12-004") at 6. ("Exhibit 10").

⁹ See Letter NA-12-086, from Kevin Hall, Deputy Federal Project Director, NNSA, to Kelly Trice, President and Project Manager, Shaw AREVA MOX Services, LLC (Sept. 17, 2012). ("Exhibit 11").

¹⁰ See Letter COR-SRSOCABM-3.20.2013-500979 from Carol Elliott, Contracting Officer, NNSA to Paul Wittingham, Contracts Manager, Shaw AREVA MOX Services, LLC (Mar. 20, 2013) ("Exhibit 12").

subsequent funding reductions, discussed below, ultimately overcame the approval process for the 2012 Rebaseline. Although NNSA never acted upon the Rebaseline proposal, it directed MOX Services to report against BCP 12-121 in its Monthly Status Reports and EVMS.¹¹

C. Contract Summary

This Claim describes MOX Services' entitlement to adjustments to the Option 1 Contract's estimated costs of CLIN 002/Target Cost and to the schedule. These adjustments will bring MOX Services within the Incentive Fee Cost and Schedule parameters which in turn entitle MOX Services to the immediate full payment of the contracted incentive fee. The following subsections synopses the most relevant contract provisions that govern this Claim.

1. Fee Structure

The scope of work set after the 2007 Baseline contemplates a total estimated cost of \$3,552,110,634,¹² as provided in CLIN 002 in Contract Modification 124, dated May 20, 2008.

In addition to a fixed fee amount of \$11,000,000, the Option 1 Contract provides for three separate fee pools: (1) cost/schedule incentive fee; (2) milestone fee; and (3) award fee.¹³

The total fee pool was calculated as a percentage of the total estimated cost of CLIN 002. The fee was extensively negotiated, and the parties ultimately agreed that the fee would be equal to 7% of the estimated cost, with 1% contingent upon the exercise of Option 2 hot start-up.¹⁴ MOX Services submitted its proposal for early Option 2 on January 26, 2009.¹⁵

¹¹ See Letter NA 12-088 from Kevin Hall, Acting Federal Project Director, NNSA, to Kelly Trice, President and CEO, Shaw AREVA MOX Services, LLC (Sept. 24, 2012) ("September 24 Letter"). ("Exhibit 13"). The cost estimate for the 2012 Rebaseline was finalized at \$6,328,584,918 per the December 2012 Monthly Report ("Exhibit 14" at 7) and December 2012 PRISM database.

¹² This amount includes the cost to perform Option 1 CLIN 002 and \$150,000,000 in Management Reserve.

¹³ The parties also included a collateral savings/cost share provision which would provide an additional upward or downward adjustment. The collateral savings/cost share adjustment is made at the end of performance, is not relevant at this time and, thus, is not addressed in this Claim.

¹⁴ See E-Mail from Craig Grochmal, to William Winkler, Ron Oakley and others, Subject, Option 1 negotiations-status (Nov. 14, 2007, 5:38PM). ("Exhibit 15").

¹⁵ Letter DCS-DOE-003189 from G.W. Painter, Contracts Manager, Shaw AREVA MOX Services, LLC to Carol Elliot, Contracting Officer, NNSA, (Jan. 26, 2009). ("Exhibit 16").

NNSA has not acted on that proposal. In recognition of its delays with respect to early Option 2, on September 5, 2011, DOE issued Modification 183, which set the Option 1 fee percentage to 6.75%, which would be increased to 7% upon exercise of the hot start-up option.¹⁶ MOX Services should not be penalized for NNSA's failure to act, and believes the early Option 2 exercise requirement should be eliminated. MOX Services currently has a claim before the Civilian Board of Contract Appeals to increase the fee pool to 7%, and this Claim uses 7% as the calculation of fee under the incentive fee provisions of the Contract.

MOX Services is eligible for a cost/schedule incentive fee totaling \$81,990,019 for completion of the Scope of Work within the value of CLIN 002 and the period of performance established by the Project schedule. The incentive fee is allocated across a number of years, and if both the estimated costs and Project schedule, as appropriately adjusted, do not exceed the parameters for that Fiscal Year set forth in the Incentive/Milestone Fee Plan, then MOX Services is entitled to incentive fee for that period.

Initially, the incentive fee earned is entirely provisional and it remains provisional for the following four annual quarters. If the EAC continues to comply with the parameters set forth in the Incentive/Milestone Fee Plan, then at the end of the fifth quarter, 50% of the provisional fee of the first quarter will become final. If, instead, the EAC exceeds either the cost or Project schedule parameter, all payments of incentive fee will cease and any provisional fee will remain provisional until the EAC once again falls within the cost and Project schedule parameters.

2. Changes Clause

The Contract includes the clause, FAR 52.243-2, Changes (Cost Reimbursement).¹⁷ For services with supplies furnished, the Changes clause provides that the Contracting Officer may at any time, by written order, make changes within the general scope of the Contract in any one or more of the following: (1) description of services to be performed; (2) time of performance; (3) place of performance of the services; (4) drawings, designs, or specifications for specialty supplies; (5) method of shipment or packing of supplies; or (6) place of delivery.¹⁸

For construction work, the Contracting Officer may make changes by written order within the general scope of the Contract in the plans and specifications or instructions incorporated in the Contract.¹⁹

¹⁶ Contract, Exhibit 1 at H.20. The incentive fee amounts in Attachment 1 to the Contract describe fee award under two different fee schedules – one in which the fee is 6.75% of the cost, and one in which the fee is 7% of the cost. *Id.* at Attachment 1.

¹⁷ Contract, Exhibit 1 at I.5.

¹⁸ FAR 52.243-2 (Alt. II).

¹⁹ FAR 52.243-2 (Alt. III).

If any such change causes an increase or decrease in the estimated cost of, or the time required for, performance of any part of the work under the Contract, whether or not changed by the order, or otherwise affects any other terms and conditions of the Contract, the Contracting Officer shall make an equitable adjustment in the: (1) estimated cost, delivery or completion schedule, or both; (2) amount of any fixed fee; and (3) other affected terms and shall modify the contract accordingly.²⁰

Although the Changes clause specifically addresses changes ordered by the Contracting Officer, it also applies to constructive changes.²¹ Furthermore, the Boards of Contract Appeals have interpreted the Changes clause reference to “other affected terms” to extend to incentive, award, and milestone fee provisions.²²

3. Risks Specifically Accepted By NNSA

In addition to actual and constructive changes cognizable generally under the changes clause, the Contract provides several examples of risk events which were not included in the Project costs, and for which NNSA took explicit responsibility.²³ These include, but are not limited to, “funding changes,” and “risks related to the requirement for rough parallelism with the Russian program.”²⁴

Indeed, these costs are also called out in the Project Execution Plan, where NNSA specifically accepted these risks. The stated rationale for setting these risks aside, and outside the scope of the Option 1 cost and schedule estimates, was that the risks “are very difficult or impossible to quantify,” but potentially carry cost impacts that are “major.”²⁵ The Contract further states: “Rather than include the costs to manage these risks in the baseline, NNSA will accept these risks and process a change to the project baseline should they occur.”²⁶

²⁰ FAR 52.243-2(b).

²¹ See *Northrop Grumman Sys. Corp. Space Sys. Div.*, ASBCA No. 54774, 10-2 B.C.A. ¶ 34517 (July 22, 2010) (recognizing that a constructive change is compensable under the Changes clause “when a contractor performs work beyond the contract requirements, without a formal change order under the Changes clause, due either to an informal order from, or through the fault of, the government.”) (internal citations omitted).

²² See *Space Gateway Support, LLC*, ASBCA No. 55608, 55658, 13 BCA ¶35,232 (Jan. 29, 2013) (recognizing that the Contracting Officer must “make adjustments, if appropriate, in ‘affected’ contract terms other than ‘fixed fee’”).

²³ Contract, Exhibit 1 at B.5.

²⁴ Contract at p. B.5.

²⁵ MOX Fuel Fabrication Facility, Project Execution Plan, 99-D-143, Revision 4, (April 2007) (“PEP”) at 28. (“Exhibit 17”).

²⁶ *Id.*

Additionally, the Contract specifically called out the method of MFFF construction performance, to include that MOX Services effectively would serve as a construction manager for the Project, and would obtain the work principally through large fixed-price construction packages.²⁷ Under this strategy, MOX Services was prohibited from self-performing significant amounts of the construction. When this performance strategy proved impracticable, to reduce the cost increase NNSA changed course and removed the prohibition on self-performance.²⁸ Accordingly, for purposes of determining incentive fee entitlement, NNSA is responsible for any costs or schedule impacts associated with this change. The following subsections describe these risk allocations in greater detail.

a. Risk of parallelism with the Russian MOX program

Acknowledging that risks related to the PMDA's Russian parallelism requirement would be "difficult or impossible to quantify," but could have "major" cost implications, the Project Execution Plan, which is incorporated into the Option 1 contract, excluded these risks from the scope of the Option 1 contract.²⁹ The Project Execution Plan then states that "NNSA will accept these risks and process a change to the project baseline should they occur."³⁰

Referencing the Project Execution Plan, the Option 1 contract defines "outside of the project risk" to include, among others, "[r]isks related to the requirement for rough parallelism with the Russian program."³¹ If such an "outside of the project risk" occurs, NNSA will seek additional funding and revise the TPC.³²

Concerned that progress on the U.S. MFFF would get too far ahead of that on the Russian MFFF, NNSA refused MOX Services' repeated requests to conduct pre-Option 1 pilot procurements of select process units. A stated purpose of these requested pilots was to generate cost and schedule information from prospective vendors on which to base the process unit cost and Project schedule estimates.

b. Risks associated with funding changes

The amount and timing of Project funding can greatly impact Project planning. Funding must be appropriated by Congress as part of the budget process, and is subject to many risks outside the contractor's control. Acknowledging that funding risks are "difficult or impossible to quantify, but could have major impacts on the TPC if realized," NNSA

²⁷ Exhibit 7, Mod. 124, at H.7.

²⁸ Exhibit 83, Mod. 152, at H.7.

²⁹ PEP, Exhibit 17 at p. 28.

³⁰ *Id.* at 28.

³¹ Contract, Exhibit 1 at B.4.

³² *Id.* at B.5.

excluded these risks from the scope of Option 1.³³ Moreover, NNSA specifically accepted funding risks: “NNSA will accept these risks and process a change to the project baseline should they occur.”³⁴ Referencing the Project Execution Plan, the Contract also treats funding risks as an “outside of the project risk” and, if such a risk occurs, the Contract commits NNSA to seek additional funding and revise the TPC.³⁵

While issues with funding levels and the funding profile have plagued many aspects of the Project, this Claim focuses on the impact of funding reductions and uncertainties since 2012 that DOE and NNSA imposed that affect the assessment of MOX Services’ performance for incentive fee entitlement purposes.

c. Construction Prohibition and required competitive fixed-price subcontracting

Rather than contract with MOX Services to perform the actual construction work for the Project, NNSA structured Option 1 such that MOX Services would serve in a construction management capacity. Specifically, MOX Services would meet its Option 1 obligations by providing personnel, facilities, equipment, materials, and supplies necessary to perform all construction management services required.³⁶ The Contract prohibited MOX Services from self-performing construction:

No construction work shall be awarded to the firm that designs the MOX Fuel Fabrication Facility or its subsidiaries or affiliates, except with the approval of the Secretary or his authorized representative. . . . Construction Management activities are not prohibited and may be performed by the prime contractor.³⁷

Instead, the Contract required MOX Services to competitively procure fixed-price subcontracts for the construction work:

The Contractor shall not perform any construction with its own forces. All construction activities shall be procured on a competitive fixed-price basis to the maximum extent practicable.³⁸

Thus, MOX Services’ role initially was that of a construction manager, implementing NNSA’s construction performance strategy. In directing this performance strategy, NNSA

³³ PEP, Exhibit 17 at 28.

³⁴ *Id.*

³⁵ Contract, Exhibit 1 at B.5.

³⁶ Mod 124, Exhibit 7 at Attachment 1, J.1.39.

³⁷ *Id.*, Mod 124 at ¶ H.7.

³⁸ *Id.*, Mod 124 at J.1.40.

sought to reduce costs through the use of competitive bidding among technically capable fixed-price subcontractors.³⁹ NNSA controlled and directed the construction performance strategy, standing to benefit from its success and accepting the risk of its failure.⁴⁰ Accordingly, Option 1 excluded the risk of NNSA's performance strategy from the cost estimate, and included the following assumption:

The estimate assumes an adequate number of suppliers, vendors and subcontractors with NQA-1 programs that have capacity and technical capabilities to support project schedule.⁴¹

NNSA's strategy ultimately proved unworkable, and NNSA removed the prohibition on MOX Services' self-performance of significant work scope. This change acknowledged the failure of NNSA's initial performance strategy, which had resulted in significant cost increases. The change in strategy to allowing MOX Services to self-perform was intended to minimize the cost increases.

³⁹ See E-Mail from Carol Elliot, to Sue King, Subject, Construction Prohibition (Oct. 20, 2008, 2:54PM) ("Carol Elliot E-mail") ("Exhibit 18"); see also Exhibit 1 at I.5 (incorporating by reference FAR 52.244-2 and FAR 52.244-5, calling for competition in subcontracting and the Government's consent to subcontract); see generally July 26, 2002 Letter and attachment from James R. Bieschke, Contracting Officer, DOE, to Robert H. Ihde, President, Duke, Cogema, Stone and Webster regarding Exercise of Option 1 ("Exhibit 19") (listing construction objectives, including procurement of "all construction activities on a competitive fixed-price basis to the maximum extent practicable").

⁴⁰ A reviewing court will determine which party "assumed the risk" of the occurrence of an event that inhibits performance. *DeCarlo and Doll, Inc. v. Dilozir*, 45 Conn. App. 633, 643 (1997) ("Determining whether the non-occurrence of a particular event was or was not a basic assumption involves a judgment as to which party assumed the risk of its occurrence....In making such determinations, a court will look at all circumstances, including the terms of the contract.") (internal citations omitted).

⁴¹ See Basis of Estimate, BCP # 05-011, (Feb. 3, 2006) ("BCP #05-011"). ("Exhibit 20").

III. PROCESS EQUIPMENT CHANGES

Beginning in March 2003, MOX Services repeatedly sought authorization to conduct pilot procurements of select process equipment. MOX Services had determined that early procurements would provide needed information to estimate accurately and reliably the cost and schedule for fabricating and testing the process units. For several years however, due to governmental concern that progress on the domestic MFFF not exceed Russia's progress on its MFFF, DOE refused to allow MOX Services to meaningfully engage potential vendors for this crucial feedback, much less conduct the requested pilot procurements. Rather than being allowed to test its estimating assumptions for these unprecedented procurements in an applied manner, MOX Services had no alternative but to create its estimates in a vacuum, without critical input from the subcontractors who would build the equipment.

Both MOX Services and the government knew the requirement for the U.S. MFFF to proceed in tandem with the Russian MFFF could produce a host of cost increases and schedule delays that could not be predicted, quantified or mitigated. NNSA agreed to accept 100% of the consequences of the risk, whatever the precipitating cause and whatever the associated costs. Accordingly, risks "related to" the "Russian parallelism" requirement explicitly were excluded from the Option 1 Contract scope, and therefore, would not be part of the estimated costs on which MOX Services' entitlement to incentive fee was based. If these risks materialized, the resulting cost and schedule increases would constitute work outside the Option 1 scope, and MOX Services would be entitled to a further adjustment to the incentive fee parameters.

In late 2007, after more than four years of denying MOX Services' requests, NNSA finally released MOX Services to conduct pilot procurements. The results were startling. MOX Services learned that the process equipment would be more expensive and time-consuming for vendors to build than MOX Services had estimated, and that the effort would require much more input and oversight by MOX Services. Given DOE's stated cause for refusing to authorize pilot procurements, it is clear that, if not for the Russian parallelism requirement, DOE would have allowed pilot procurements before MOX Services submitted its Option 1 proposal. From those pilots, MOX Services would have known well in advance of the Option 1 proposal that MOX Services' estimating models could not be relied upon for process units.

Time has shown that the process unit underestimates were systemic, not isolated. The challenges first identified in the pilot procurement proved to be inherent, or at least tenacious, in this unprecedented project. Americanizing the French reference plant designs and fabricating the process units within the strictures of the NRC's regulatory regime – specifically, the Nuclear Quality Assurance ("NQA-1") criteria outlined by the American Society of Mechanical Engineers ("ASME") – were more difficult and expensive than NNSA and MOX Services anticipated before the pilot procurements. Thus, much of the cost and schedule increase is due to the unrealistically low estimates that resulted from the limited information DOE allowed MOX Services to gather.

That the process unit estimates would prove to be too low unquestionably is “related to” the Russian parallelism requirement. It is precisely the type of risk that NNSA and MOX Services agreed would be excluded from the scope of Option 1. NNSA accepted this risk and thus is responsible for the increased costs of the Project from what is, by contractual definition, added work scope.

To estimate the impact of this out-of-scope work, MOX Services has compared the estimates set forth in the 2007 Baseline to those in the 2012 Rebaseline with Addendum.⁴² As shown in Chart III.1, the government is responsible for \$1,324,966,109 in out-of-scope work. Of that amount, \$543,116,396 is discrete costs, which reflect estimated additional costs to fabricate and assemble the units, and to perform Title III engineering and quality assurance (QA) functions. The remaining out-of-scope costs, \$781,849,714, are time-related costs, and reflect the estimated schedule extensions of approximately 42 months for the completion of Option 1 caused by delays in the process unit procurement cycle.⁴³

⁴² It is appropriate and reasonable for this Claim to measure the impact by comparing the 2007 Baseline to the 2012 Rebaseline with Addendum. The 2007 Baseline carried forward the estimates contained in MOX Services’ Option 1 proposal, and the 2012 Rebaseline is the last comprehensive EAC that reflects a full funding profile through Project completion. In other words, the best estimate of the out-of-scope process unit-related costs are those developed for the 2012 Rebaseline, which incorporates approximately 4½ years of Project experience and significant hard data (actuals) from the 2007 Baseline.

⁴³ The 2012 Rebaseline included an approximately 42 month delay relative to the 2007 Baseline.

Chart III.1, Total Process Equipment Cost Growth⁴⁴

	[A]	[B]	[C] = B - A	[D]
Category Description	2007 Baseline	2012 Rebaseline with Addendum	Cost Growth	Claim Growth
Process Unit Fabrication	\$ 234,510,584	\$ 589,956,954	\$ 355,446,370	\$ 345,578,075
Process Unit Assembly, Materials, and Supervision	83,887,205	185,032,060	101,144,856	100,569,601
Process Unit Title III Engineering	27,146,095	83,802,398	56,656,303	56,656,303
Subtotal	\$ 345,543,884	\$ 858,791,412	\$ 513,247,529	\$ 502,803,979
Quality Assurance Related to Process Units	\$ 4,049,445	\$ 29,703,639	\$ 25,654,194	\$ 25,654,194
Quality Assurance Related to Hotel Load	2,313,760	16,971,983	14,658,222	\$ 14,658,222
Subtotal - Quality Assurance	\$ 6,363,205	\$ 46,675,622	\$ 40,312,416	\$ 40,312,416
Total Process Unit Direct Cost Growth	\$ 351,907,089	\$ 905,467,034	\$ 553,559,945	\$ 543,116,396
Hotel Load	\$ 799,014,425	\$ 1,612,646,690	\$ 813,632,265	\$ 781,849,714
Grand Total	\$ 1,150,921,514	\$ 2,518,113,724	\$ 1,367,192,210	\$ 1,324,966,109

A. Challenges On The Russian MFFF Caused DOE To Refuse MOX Services' Request To Conduct Process Unit Pilot Procurements

In September 2000, the United States and Russia executed the PMDA, under which each party agreed to dispose of at least 34 metric tons of surplus weapons grade plutonium from its nuclear stockpile.⁴⁵ A major tenet of the agreement was that the parties would “implement[] their respective disposition programs in parallel to the extent practicable.”⁴⁶ This “Russian parallelism” requirement has posed continued challenges to DOE and, by extension, to MOX Services. From the beginning, the United States’ demonstrated commitment to meeting the requirements of the PMDA have not been matched by Russia. As a result of the uncertainties arising from Russia’s lack of commitment, which MOX Services was powerless to affect, NNSA accepted the risks related to the requirement for Russian parallelism.

The PMDA did not dictate the technology each party was to use. Early on the United States decided to adapt the French MOX technology for use in the U.S. MFFF. For its MOX facility, for several years Russia planned to adapt existing equipment from a Siemens plant located in Germany.⁴⁷ In early 2002, however, Siemens announced that it would dispose of

⁴⁴ See Schedule 3.02.

⁴⁵ PMDA, Exhibit 5, art. II, ¶ 1.

⁴⁶ *Id.*, art. II, ¶ 3.

⁴⁷ Joint U.S.-Russian Working Group on Cost Analysis and Economics in Plutonium Disposition, Scenarios and Costs in the Disposition of Weapons-Grade Plutonium

its equipment differently and that it would no longer be available to the Russian MFFF.⁴⁸ Sent back to the drawing board, it was only after several months of discussions with the U.S. that, in December 2002, Russia too elected to adapt the French MOX technology for use in the Russian MFFF.⁴⁹

The driving factor behind Russia's decision to use the French MOX technology was to meet the "essential element" of the PMDA of keeping the Russian MFFF and the U.S. MFFF on "roughly parallel construction and operational schedules."⁵⁰ But, by this point in time, MOX Services had been working for over three years to Americanize the French designs, and, by no later than spring 2003, MOX Services was requesting authority to conduct pilot procurements of U.S. MFFF process equipment.⁵¹

Russia's switch from using existing German equipment to adapting French technology that would have to be designed and built to Russia's particular needs was the first snag to hit the Russian MFFF which, in turn, caused DOE to slow down MOX Services. It was far from the last. Russia's determination to use the French technology necessarily meant that Russia would rely in large part on the engineering design work MOX Services had performed to date and would continue to develop. This in turn meant that Russian MFFF progress always would be behind that of the U.S. MFFF. This lag, in combination with the Russian parallelism requirement, caused DOE to exert a constant drag on MOX Services' efforts and progress.

Meaningful work on the Russian MFFF design could not begin until the United States and Russia agreed to a liability protocol for MOX Services' work in Russia. The negotiations were contentious and plodding.⁵² The countries completed negotiations on a liability protocol in July 2005,⁵³ but the agreement did not clear Russian bureaucratic

Withdrawn from Russia's Nuclear Military Program (Apr. 29, 2003) at Executive Summary iii ("Exhibit 21").

⁴⁸ *Id.*

⁴⁹ *Id.*

⁵⁰ *Id.* at Executive Summary at iii, Introduction at 3, n. 8.

⁵¹ Letter DCS-DOE-001138 from T.E. Touchstone, Deputy Project Manager, Duke Cogema Stone & Webster, to Patrick Rhoads, MOX Fuel Program Manager, DOE (June 20, 2003) ("June 20, 2003 Letter") at 9 ("Exhibit 22").

⁵² DOE OIG, Audit Report DOE/IG-0713, Status of the Mixed Oxide Fuel Fabrication Facility (Dec. 2005) ("DOE/IG-0713") at 1 ("Exhibit 23"). This Audit Report states that the "disagreements regarding liability protection for U.S. companies performing work in Russia ... delayed construction of the U.S. facility." *Id.* It further concludes that the "Russian liability issue had a significant impact on the cost and schedule of the [U.S. MFFF] project." *Id.* at 2.

⁵³ *Id.*

channels for over a year. The liability protocol to the PMDA finally was signed on September 15, 2006.⁵⁴

The liability protocol delay drove DOE to handcuff MOX Services, lest the United States signal to Russia that our country's commitment to implementing the PMDA was no longer linked to Russia's commitment. Indeed, at the time DOE admitted, and the DOE Office of Inspector General ("OIG") agreed, that the Russian liability protocol impasse resulted in a 2½ year delay to the U.S. MFFF.⁵⁵ The most significant and impactful manifestation of the Russian parallelism requirement to date was that DOE refused to allow MOX Services to go forward with process equipment pilot procurements.

B. The Government Prevented MOX Services From Conducting Pilot Procurements For Over Four Years

1. 2003-2004: Citing the Need to Maintain Parallelism with the Russian MFFF, DOE Refuses to Authorize MOX Services to Conduct Pilot Procurements

Beginning in early 2003, MOX Services planned to conduct pilot procurements for process units. A vendor forum was planned for June 9-13, 2003, with interested subcontractors to obtain early industry feedback on the clarity and ease of use of process unit designs and input on fabrication coordination.⁵⁶ This objective was in answer to the identified risk attending the "Process Equipment Procurement" effort. Specifically, MOX Services believed that it faced potential difficulties in identifying capable manufacturers to fabricate and test the process units in both the mixed oxide and aqueous polishing portions of the MFFF. This risk was accorded the most critical rank of "Risk Management Level 1, High Priority."⁵⁷

DOE rejected MOX Services' pilot procurement requests. In a June 2003 "Procurement Workshop," DOE informed MOX Services that MOX Services could not conduct a pilot procurement because the U.S. government did not want to give the appearance that the development of the domestic MFFF was far ahead of the progress Russia had achieved on its MFFF.⁵⁸ DOE placed all process unit procurements on indefinite hold until Russia proved its commitment to meeting its MFFF obligations. To maintain a rough

⁵⁴ NNSA Press Release, "U.S. and Russia Sign Liability Protocol" (Sept. 15, 2006) ("Exhibit 24").

⁵⁵ DOE/ID-0713, Exhibit 23, at 7.

⁵⁶ June 20, 2003 Letter, Exhibit 22, at 9.

⁵⁷ *Id.*

⁵⁸ Letter DCS-DOE-001103 from T.E. Touchstone, Deputy Project Manager, Duke Cogema Stone & Webster, to Patrick Rhoads, MOX Fuel Program Manager, DOE (Sept. 18, 2003) at 1 ("Exhibit 25").

parallelism with Russia, DOE not only forbade MOX Services from conducting pilot procurements but also demanded that MOX Services cancel its long-planned vendor forum designed to capture industry's feedback on its ability to manufacture the process units.⁵⁹ MOX Services was "not able to promote in a public manner the intent ... to go forward ... with procuring MFFF equipment" before the "direction of the Russian project firm[ed]."⁶⁰

DOE's refusal to allow MOX Services to move forward with procurement activities continued despite MOX Services' warnings that certain process units were on the MFFF critical path.⁶¹ In January 2004, DOE indicated that it likely would not release MOX Services to conduct procurements for the entire calendar year, and DOE asked MOX Services to assess the impact of that eventuality.⁶² Demonstrating the importance of involving the vendor community in the design effort, in its February 2004 response to DOE's request, MOX Services repeated its previous admonitions to DOE that it was critical that MOX Services be allowed to conduct some procurement activity.⁶³

MOX Services proposed that NNSA allow it to enter into Blanket Ordering Agreements ("BOAs") with select process equipment vendors. MOX Services had two reasons for doing so. First, MOX Services sought "to obtain product information on vendor supplied components ... to support development of detail design of process units, systems or equipment."⁶⁴ MOX Services informed DOE that vendor feedback garnered from BOA relationships may result in "significant design changes," which would likely impact the designs of several process units.⁶⁵ MOX Services feared that DOE was forcing MOX Services to continue with the design of process units to a build-to-print level of specificity in a vacuum, prohibited by DOE from learning what the marketplace already offered. MOX Services urged DOE to free it to incorporate established designs and manufactured components into the process units, rather than force MOX Services to continue its design work with blinders on.

Second, MOX Services reasonably believed that efficiently procuring the process units depended in large part on testing the capabilities of the marketplace. To this end, MOX Services requested that it be allowed to enter BOAs with certain vendors, under which MOX

⁵⁹ *Id.* at 2.

⁶⁰ *Id.* at 1, 2.

⁶¹ Duke Cogema Stone & Webster, MOX Fuel Fabrication Facility: DCS Recommendation to DOE for Acquisition of Process Units (July 29, 2003) ("DCS Recommendation") at 2 ("Exhibit 26").

⁶² Letter DCS-DOE-001486 from Ed Brabazon, Vice President, Duke Cogema Stone & Webster, to James V. Johnson, Technical Manager, DOE (Feb. 19, 2004) ("Exhibit 27").

⁶³ *Id.*

⁶⁴ *Id.* at 1.

⁶⁵ *Id.* at 2.

Services could release select designs “to be appropriately interfaced with the equipment.”⁶⁶ MOX Services set forth the reasoned justification that such pre-arrangements would result in an “improved price and reduced delivery time” once an order was placed.⁶⁷

MOX Services explained to NNSA that such limited activity would not involve any financial or procurement commitment but would allow MOX Services to obtain vendors’ engineering input without compromising the government’s fidelity to the PMDA’s Russian parallelism requirement. At this point, MOX Services had been working on the process unit designs for over three years, yet it had not yet been allowed to gather vendor feedback on the constructability of the designs or on industry’s capability to build the units to NRC’s quality standards.

Despite MOX Services’ insistence to NNSA that conducting early procurements would generate critical information to enable MOX Services to obtain the process equipment in a timely and cost-effective manner, NNSA continued throughout 2004 to refuse to allow MOX Services to proceed.

2. 2005-2007 Baseline: The Government Continues To Prohibit Pilot Procurements

In February 2005, to support DOE decision-making on the MFFF baseline, DOE directed MOX Services to participate on several joint review teams, including one focused on the process equipment acquisition strategy.⁶⁸ In April 2005, the joint DOE-MOX Services team released its final report, “MFFF Rebaselining Team – Process Equipment Acquisition Strategy.”⁶⁹ In the report, MOX Services again, and repeatedly, requested to be allowed to conduct a few early process unit procurements.⁷⁰

Specifically, MOX Services recommended that DOE allow it to proceed on four design-build units and two build-to-print units.⁷¹ The recommendation was made under the MFFF base contract because process equipment purchased in the normal course was slated to occur under MA17 of the Option 1 contract.⁷²

MOX Services emphasized several benefits of the requested pilot procurements. The pilots would promote MOX Services’ understanding of the market’s capability to complete

⁶⁶ *Id.* at 3.

⁶⁷ *Id.* at 1.

⁶⁸ Letter DCS-DOE-002125 from L.R. Barnes, President, Duke Cogema Stone & Webster, to Kenneth M. Bromberg, DOE (June 2, 2005) (“June 2, 2005 Letter”) at 1 (“Exhibit 28”).

⁶⁹ *Id.* at 3.

⁷⁰ *Id.* at vi, 37.

⁷¹ *Id.* at E2-E3.

⁷² *See id.* at E-1.

successfully the different types of design-build and build-to-print units. MOX Services also stated that the pilot procurements would provide applied indications of subcontractor costs and durations for process unit design and assembly, among other subcontractor feedback. Additionally, MOX Services noted that the initial procurements would establish a practical, tested baseline in anticipation of future procurements of the same type.⁷³

Throughout the Acquisition Strategy document, the DOE-MOX Services team identified continuing DOE-imposed constraints on MOX Services' procurement activity. For example, DOE hampered MOX Services' process unit design strategy by refusing to authorize MOX Services to pursue BOAs to set the parameters by which subcontractors could provide critical design input.⁷⁴ DOE also hindered MOX Services' ability to implement a cogent process unit assembly strategy by, among other things, refusing to release MOX Services to select vendors for any units.⁷⁵

Instead of allowing MOX Services to take the most logical and repeatedly requested approach of conducting pilot procurements, DOE limited MOX Services to assessing the capability and capacity of the marketplace through vendor questionnaires and visits. Notably, this effort did not include even attempting to capture information relevant to MOX Services' ability to generate accurate cost and schedule estimates.⁷⁶

Moreover, DOE severely limited MOX Services' ability to share information about the process units with prospective vendors. Thus, even if they wanted to, vendors could not provide MOX Services meaningful feedback to inform MOX Services' cost and schedule estimates. In order to obtain DOE approval to begin dialogs with potential vendors, MOX Services had to promise that it would not discuss Project details such as dates, quantities, drawings or budget, and that it would not issue any procurement documents.⁷⁷

DOE authorized MOX Services to engage potential contractors only after MOX Services assured the contracting officer that MOX Services would share only the barest parameters of the Project with vendors.⁷⁸ Specifically, MOX Services promised that it would limit the information it showed to vendors to photographs of certain process units, very rough estimates of the delivery schedule, verbal summaries of the units' size and weight, and a video of the MELOX facility.⁷⁹ Accordingly, the August 30, 2005 market assessment that

⁷³ *Id.* at vi, 37, E1.

⁷⁴ *Id.* at 2-3, A-1 to A-2.

⁷⁵ *Id.* at A-4 to A-5.

⁷⁶ Letter DCS-DOE-002225 from Frank T. Haseltine, Vice President & Business Manager, Duke Cogema Stone & Webster, to Martin Newdorf, DOE (August 30, 2005) at 1 ("Exhibit 29").

⁷⁷ June 2, 2005 Letter, Exhibit 28, at 32.

⁷⁸ *Id.* at 35-36.

⁷⁹ *Id.* at 36.

formed the second part of the process equipment acquisition team's output exclusively addressed the supposed capability and capacity of the marketplace, and not the likely cost and duration of procuring the process units.

The MFFF maintained the status quo whereby MOX Services was prohibited from conducting process unit pilot procurements through its submission of its Option 1 proposal on March 16, 2006, and through the 2007 Project baseline. MOX Services finalized its Process Unit Estimating Methodology in October 2005 and submitted it to DOE as part of its Option 1 Basis of Estimate. Thus, the October 2005 estimates were carried forward into MOX Services' proposal. DOE authorized MOX Services' performance baseline (Critical Decision 2) and start of construction (Critical Decision 3) in the same document.⁸⁰ The performance baseline was authorized as of April 10, 2007, and the start of construction was authorized as of August 1, 2007.⁸¹ Because DOE did not authorize process unit pilot procurements under the base contract,⁸² MOX Services entered the Option 1 Contract with completely untested process equipment estimates.

C. The Process Unit Estimates Necessarily Were Based On Insufficient Information

The March 2006 Option 1 proposal's process unit estimates were prepared without the benefit of the hard data that would have been generated by pilot procurements. This use of the generic methodology was made necessary by DOE's rejection of MOX Services' repeated requests to conduct such early procurements.⁸³ Thus, MOX Services had no as-

⁸⁰ Letter from Clay H. Ramsey, Federal Project Director, NNSA to Dave Stinson, President and Project Manager, Shaw AREVA MOX Services, LLC, (April 24, 2007) Exhibit 6. The CD-2/3 approval was based on the Updated Minutes of the July 21, 2006 Energy Systems Acquisition Advisory Board meeting, which was attached to the authorization memorandum for CD-2/3. The Minutes noted that among the causes of the cost growth on the U.S. MFFF to that point was the 2½ year delay due to the Russian parallelism requirement and the “[u]nanticipated complexities” in adapting the French reference plant technology to use on weapons-grade plutonium in the United States under the NRC regulations.

⁸¹ *Id.*

⁸² DOE authorized Critical Decision (“CD”) 3B, “Critical Long Lead Procurements,” in April 2006. *See* PEP, Exhibit 17, at 9. This allowed MOX Services to proceed with procurement of trapped equipment, which included various types of tanks. *Id.* at 10. But this limited authorization was not broad or early enough to provide the needed information relative to the process unit estimates.

⁸³ Contract No. DE-AC02-99CHI10888 MOX Fuel Project Option 1 Proposal Submittal, Volume I, Introduction (March 15, 2006) (excerpts) and U.S. Department of Energy, Work Breakdown Structure Dictionary, Part II Element Definition, WBS Element Code 01, Capital and Operating and “Process Unit Cost Estimate Methodology” (October 10, 2005), Methodology at 1 (collectively “Exhibit 30”).

applied data on this unique equipment on which to base its estimates, or at least to act as a check on the realism of estimates produced by substitute means.

The consequences of DOE's refusal to allow MOX Services to conduct pilot procurements to generate accurate process unit estimates were made more acute by the lack of design information available to MOX Services. The Methodology evaluated two major cost variables to produce the cost estimate: (1) Labor and (2) Equipment and Materials.⁸⁴

When the United States and Russia agreed to a liability protocol in July 2005, the South Carolina congressional delegation began to assert tremendous pressure on DOE to begin MFFF construction, which included the process unit procurements.⁸⁵ Responding to this political pressure, DOE required MOX Services to estimate the costs of the MFFF process units when the equipment and associated software design was only approximately 50% complete.⁸⁶

The Cost Methodology for the Labor component used a "top down" approach for all 97 units.⁸⁷ This approach selected the simplest process unit of each of three types – glovebox, non-glovebox, and laboratory process unit – and then, using a variety of factors, estimated the amount of craft and non-craft labor that would be needed to build the unit.⁸⁸ MOX Services applied labor rates to the labor hours to produce Labor cost baselines,⁸⁹ and, using "complexity factors," extrapolated the baselines to all other units of the same type.⁹⁰

The Materials Methodology was similar to that of Labor. MOX Services chose representative units of each type and attempted to secure estimates for each type of subassembly that comprised the units (such as glovebox components) and purchased and fabricated parts.⁹¹ Once the estimates were established for the reference units, these were used to extrapolate materials costs to other units of the type "to the maximum extent possible," again using multiple complexity factors.⁹² But in this process, DOE prevented MOX Services from sharing sufficient information with vendors to enable them either to

⁸⁴ Exhibit 30, Methodology, at 1.

⁸⁵ See Discussion in Claim Section V.D.

⁸⁶ *Id.* at Option 1 Proposal 1-3.

⁸⁷ *Id.* at Methodology 9.

⁸⁸ *Id.* at 8-9.

⁸⁹ *Id.*

⁹⁰ *Id.* at 9-10. The accuracy of the Labor estimate was further hampered by the absence of engineering drawings for the units that would provide the cost and schedule basis from which all other units would be drawn. *Id.* at 8.

⁹¹ *Id.* at 23.

⁹² *Id.* at 23, 26.

prepare estimates on complete process units or even to solicit estimates on Americanized versions of equipment.⁹³

In short, the generic process unit estimating methodology MOX Services had to use was a poor substitute for one based on and applied in pilot procurements. The accuracy of the estimates depended on untested data on a handful of process units and extrapolated to the process units at large.

DOE was well aware of the potential consequences of the severe estimating constraints under which MOX Services was required to operate. The caveats concerning the reliability of the process unit estimates included in MOX Services' Cost Estimating Methodology were underscored in the External Independent Review ("EIR") of the CD 2/3 Baseline commissioned by DOE. Among other concerns, the EIR noted that the extrapolations were based on equipment designs that were not even half complete, and it thus recommended that budgetary quotes be obtained for all process units. The EIR also recommended that MOX Services' estimates be considered merely "conceptual" and not "budgetary."⁹⁴ Overall, the EIR found MOX Services' cost estimating methodology and overall plan for purchasing process equipment to be reasonable.⁹⁵ But, like MOX Services, the EIR team was severely limited in the review methodology DOE allowed it to pursue. The EIR stated that although its review plan "anticipated communication with domestic suppliers to determine the reasonableness of the estimates for planned domestic purchases," DOE instructed the EIR "not to contact any vendors because it could potentially 'compromise the procurement process'."⁹⁶

D. The Government Is Responsible For MOX Services' Increased Process Unit Costs

As shown above, from early 2003 on, MOX Services repeatedly urged DOE to allow MOX Services to conduct process equipment pilot procurements. One of the express purposes of MOX Services' requests was to obtain better indications of process unit subcontractor costs and schedule durations for completing the design, fabricating and assembling, and testing and installing the units in a domestic context governed by strict NRC regulations.

It was ill-considered for DOE to require MOX Services to estimate the cost and schedule of the process units without the benefit of pilot procurements. The U.S. MFFF is an incredibly complex facility that will deploy unique technology on a great scale, and its

⁹³ *Id.* at 24-25.

⁹⁴ Burns and Roe Enterprises, Inc., External Independent Review of the Mixed Oxide Fuel Fabrication Facility (MFFF) Project Critical Decision 2/3 Baseline (BREI-LSP-R-06-03), for the U.S. Department of Energy (June 2006) ("EIR") at 22 ("Exhibit 31").

⁹⁵ *Id.* at 141-142.

⁹⁶ *Id.*

design is governed by a strict set of NRC regulatory standards that were untried in the marketplace in which the process units would be fabricated. By preventing MOX Services from conducting pilot procurements to inform its estimates, DOE assumed the risk and the follow-on effects when those hamstrung estimates fell far short of reality.⁹⁷ In any event, the significant underestimates on the process units, in terms of discrete costs and schedule, fall within the Option 1 Contract provision whereby NNSA accepted risks related to the Russian parallelism requirement and limits the scope of the Contract to exclude all impacts resulting from that requirement.

1. NNSA Accepted the Risk of Shortfalls in the Process Unit Estimates

On June 6, 2005, MOX Services identified Risk #225 as the possible impact that the delay of the Russian MFFF could impose on the U.S. MFFF.⁹⁸ Risk #225 was labeled a “DOE Program Risk.”⁹⁹ Specifically calling out the then two-year delay of a United States-Russia liability protocol, Risk #225 observed that the time needed to work out this international agreement (as well as one on technology transfer) was uncertain.¹⁰⁰ The likelihood of the risk materializing was identified as “high,” and, indeed, the Russian MFFF had been behind the U.S. MFFF ever since the PMDA was executed in 2000.¹⁰¹ MOX Services estimated the consequence of Risk #225 to be “severe” and, as a placeholder, estimated the risk to be 36 months.¹⁰²

In the Option 1 negotiations, MOX Services, in collaboration with NNSA, assigned values and responsibilities to the identified Project risks through the Technical and Programmatic Risk Assessment (“TPRA”) for Critical Decision 2 (approval of the performance baseline) and Critical Decision 3 (authorization of the remainder of construction activities). The CD 2/3 TPRA Rev. 3, issued in June 2006, assigned Risk #225 “zero dollar

⁹⁷ This is so, even if DOE itself was obliged to deny MOX Services the ability to conduct pilot procurements for legitimate international diplomatic reasons. DOE may have imposed the restriction on pilot procurements in response to State Department insistence that the domestic MFFF not progress too far ahead of the Russian MFFF. The impetus is of no moment, however, as NNSA cannot, by pointing blame at another federal agency, escape the risk it assumed both contractually and by hobbling MOX Services’ estimating function.

⁹⁸ The risk’s “impacted scope” was stated to be “construction,” which included the procurement and installation of the process equipment.

⁹⁹ Letter DCS-DOE-002282 from Frank T. Haseltine, Jr., Vice President, Duke Cogema Stone & Webster, to Martin Newdorf, Federal Project Director, DOE (Oct. 13, 2005) (“Exhibit 32”).

¹⁰⁰ *Id.*

¹⁰¹ *Id.*

¹⁰² *Id.*

value” (and it was not included in the schedule risk recap) because it “[was] transferred and accepted by DOE.”¹⁰³

NNSA’s acceptance of the Russian parallelism risk was included in the Option 1 Contract, first in the MFFF Project Execution Plan, and then in the definitized Option 1.¹⁰⁴ Section 4 of the PEP, “Project Definition,” “descri[bes] the MFFF Project elements, describes how they are related, and identifies the salient interfaces.”¹⁰⁵ As part of the Option 1 cost baseline, PEP (Rev. 4), issued in April 2007, provided that the former Risk #225 was a “Risk Outside Scope” that would not contribute to the calculation of the Project’s contingency calculations.¹⁰⁶ The PEP stated the exclusion in very broad terms: “Risks related to the requirement for rough parallelism with the Russian program.”¹⁰⁷

The PEP described this risk as “difficult or impossible to quantify” and acknowledged that it carried the possibility of “major impacts.”¹⁰⁸ In the event that the risk of Russian parallelism materialized, NNSA agreed to “accept these risks and process a change to the project baseline should they occur.”¹⁰⁹ In other words, the PEP expressly defined the MFFF Project to exclude from its scope any manifestations of risks related to Russian parallelism. In effect, the parties agreed that, if such risks materialized, NNSA would enter a new contract with MOX Services to cover what the PEP defined to be new scope. With this clearly defined risk allocation embedded in the contract, at the time of the 2007 Baseline negotiations there was no cause or reason for MOX Services to insist on an additional contract provision regarding the insufficiency of the information on which the process unit estimates were based.

¹⁰³ Duke Cogema Stone & Webster, MFFF Mixed Oxide Fuel Fabrication Facility, Technical and Programmatic Risk Assessment, Critical, Decision 2/3, Revision 3 (June 14, 2006) (“TPRA”) at 5 (“Exhibit 33”).

¹⁰⁴ It is of no moment that the Russian parallelism provision appears in Clause B.4 of the fee provisions, while the Incentive Fee is set forth in Clause B.3. This is so because, among other reasons, Russian parallelism is defined as an “outside of the project risk,” which, if realized, necessarily will result in a change to the Target Cost of CLIN 2. The risks set forth in Clause B.4 are cause for adjustment to the Incentive Fee Band in Clause B.3.

¹⁰⁵ PEP, Exhibit 17, at 23.

¹⁰⁶ *Id.* at 28. Among other things, the PEP “defines and discusses technical, schedule, and cost baselines,” and it is the “living document” that governs the project. *Id.* at 4. The PEP also “defines how the project will be accomplished, resource requirements, technical considerations, and roles and responsibilities of the Integrated Project Team.” *Id.*

¹⁰⁷ *Id.* at 28.

¹⁰⁸ *Id.*

¹⁰⁹ *Id.*

The provision that NNSA would bear the risks related to the Russian parallelism requirement, and would treat such realized risks as new work scope, was carried forward into the definitized Option 1 Contract, signed in May 2008, which itself incorporated the language of the PEP.¹¹⁰ Option 1 expressly excluded “Risks related to the requirement for rough parallelism with the Russian program” from the parties’ estimated costs and negotiated fees.¹¹¹ Option 1 sets forth four exceptions to MOX Services’ agreement that the fees will not increase, notwithstanding the changes clause. One of these exceptions is when the “Total Project Costs (TPC) are changed and the change is fee-bearing in accordance with the terms and conditions of this contract.”

This provision then states that, “as described in the Project Execution Plan, a change rebaseline of the TPC may result when certain Project risks which are not included in the calculations of Project Costs occur.”

In short, just as the PEP excluded Russian parallelism risk from the Option 1 work scope, the Option 1 definitization did not include the risk in the calculated costs of the Project. And, of course, any contract modifications that were needed to pay for these realized risks would be “fee-bearing in accordance with the terms and conditions of [the] contract,” because under the changes clause added scope is entitled to fee. FAR § 52.243-2.

2. The Shortfalls in the Process Equipment Costs and Schedule Estimates Are Realized Risks “Related to” the Russian Parallelism Requirement

Contract interpretation begins with an examination of the plain language of the contract, which, if unambiguous on its face, controls and ends the inquiry. *LAI Services, Inc. v. Gates*, 573 F.3d 1306, 1314 (Fed. Cir. 2009); *Hunt Constr. Gp., Inc. v. United States*, 281 F.3d 1369, 1373 (Fed. Cir. 2002). Here, the inquiry need go no further because, plainly read, the breadth of the phrase “related to” encompasses the nexus between the Russian parallelism requirement and the risk that the process unit estimates would not accurately reflect their costs and schedule.

¹¹⁰ Mod 124, Exhibit 7, at B.4(a)(iii). The Mod 124 definitization of Option 1 occurred before MOX Services could award any subcontracts for process equipment pilot procurements.

¹¹¹ A plain reading of the Russian parallelism provisions do not limit the risk allocation only to new causes that arose after contract execution; the provisions equally apply to later-arising impacts from past causes. *McAbbe Const., Inc. v. United States*, 97 F.3d 1431, 1435 (Fed. Cir. 1996) (clear, unambiguous contract terms must be accorded their plain meaning). That the under-informed process unit estimates could prove to be inadequate was hanging fire at the time of the 2007 Baseline. That is, whether the risk would in fact materialize was unknowable, and the Russian parallelism provisions squarely added all related fee risk to the cost risk that was already on the Government by virtue of the contract type.

As an initial matter, the ordinary meaning of “relate” is broad and is defined to mean “to stand in some relation; to have a bearing or concern; to pertain; refer; to bring into association with or connection with.” Black’s Law Dictionary 1288 (6th Ed. 1990). The U.S. Supreme Court has observed that the plain meaning of the phrase “relating to” is “broad.” *Morales v. Trans World Airlines, Inc.*, 504 U.S. 374, 383 (1992); *see Pilot Life Ins. Co. v. Dedeaux*, 481 U.S. 41, 47 (1987) (characterizing the term “relate to” as “deliberately expansive”); *FMC Corp v. Holliday*, 498 U.S. 52, 58 (1990) (stating that the term “relate to” is “conspicuous in its breadth”).

In deciding a matter of contract interpretation, the Federal Circuit has noted that “[i]n general, ‘related to’ means one thing has some ... connection to another thing.” *Tyco Healthcare Group LP v. Ethicon Endo-Surgery, Inc.*, 587 F.3d 1375, 1378 (Fed. Cir. 2009). The court further noted that “[i]n legal parlance, ‘related’ takes meanings with similar breadth.” *Id.* at 1379; *see Coregis Insurance Co. v. American Health Foundation, Inc.*, 241 F.3d 123, 128-29 (2d Cir. 2001) (Sotomayor, J.) (noting that the term “‘related to’ ... is not necessarily tied to the concept of causal connection” and holding as a matter of law that the phrase’s use in an insurance contract unambiguously excluded coverage).

Here, the risk that the process unit estimates would not reasonably reflect the costs or time required to procure the process units are “related to” the Russian parallelism requirement. For years, DOE refused MOX Services’ requests to conduct pilot procurements out of concern that doing so would violate the PMDA by implementing the U.S. MFFF far ahead of the Russian MFFF. As a result, MOX Services had to use untested, generic estimating methodology on unique equipment, rather than what it sought – real world application of the designs in a vendor’s fabrication and assembly environment. The Option 1 Contract protected MOX Services from the possibility that the generic estimates would fall far short of the discrete costs and schedule durations needed by excluding from the Contract’s scope risks “related to” the Russian parallelism requirement.

Given that this was a cost-type contract, DOE agreed that it would pay MOX Services’ allowable costs, including those that exceeded costs. *See generally* FAR Subpart 31.2. There was no reason to call out the allocation of cost risk specifically with respect to Russian parallelism. Thus, the “Russian parallelism” risk called out in the contract referred to fee risk, such as Incentive Fee, not cost risk. *See Muniz v. United States*, 972 F.2d 1304, 1320 (Fed. Cir. 1992) (citing as a “cardinal rule of contract interpretation” to give meaning to all terms in a way that does not render provisions “useless” or “superfluous”).

E. Impact

The generic estimating methodology produced systematic underestimates in terms of discrete costs (how much it cost to manufacture the process units) and Hotel Load costs (how long the process units would take to build, and thus cause prolonged Project support costs that are not tied to a particular end product). Pre-Option 1 pilot procurements would have provided MOX Services critical cost and schedule information and would have revealed the

estimates produced by generic means to be unrealistically low. This was proven when DOE finally authorized MOX Services to conduct pilots.

If DOE had allowed MOX Services to conduct the pilot procurements in 2003 or 2004, MOX Services would have known that the process unit cost estimates determined through generic means were much too low and the schedule estimates far too short, and MOX Services would have adjusted the estimates accordingly.

1. MOX Services' Pilot Procurements Revealed That the Process Unit Estimates Were Unrealistically Low

Despite MOX Services' requests for authority to conduct process unit pilot procurements beginning in early 2003, DOE did not authorize this activity until 2007.¹¹² These pilot procurements came too late to impact the Option 1 cost estimates which, with modest adjustments, were carried forward into the 2007 Baseline and the definitized Mod 124 in May 2008.

Beginning in late 2007, MOX Services piloted two of the simplest glove box process units, the Pellet Repackaging ("PAD") and Scrap Box Loading Unit ("PAR"). The information generated from these pilots was profound and bracing. Among other things, the pilots revealed a tremendous shortfall in the process unit cost and schedule estimates. MOX Services learned that actual costs for completing the design and building the units would be much greater and would take much longer.

Under the generic estimating methodology MOX Services was forced to employ in lieu of pilot procurements, the PAD and PAR units together were estimated to cost \$1,149,324, not including Title III engineering. The actual cost of these two units was \$4,160,989 – a variance of over 250%.

Chart III.2, PAD / PAR Cost Growth¹¹³

Cost Account	Cost Account Description	[A] 2007 Baseline	[B] 2012 Rebaseline with Addendum (Actual Costs)	[C] = B - A Cost Growth	[D] = C / A Percent Variance
1708.8748	PAD	\$ 594,028	\$ 2,114,547	\$ 1,520,519	256%
1708.8749	PAR	\$ 555,296	\$ 2,046,442	\$ 1,491,146	269%

¹¹² See April 24, 2007 Letter, Exhibit 6 (authorizing construction activity to begin on August 1, 2007). When DOE authorized Option 1 construction activity, the documentation supporting this decision noted that the U.S. MFFF had been delayed 2½ years due to Russian parallelism concerns.

¹¹³ See Schedule 3.11.

Further, the PAD and PAR units took approximately 70% longer to manufacture and test than had been estimated and included in the 2007 Baseline.¹¹⁴

Chart III.3, PAD Schedule Variance

PAD Delay Measurements (2007 Baseline vs. January 2012 Update)									
No.	Delay Issue	As-Planned			As-Built			Variance	
		Start	Finish	Duration	Start	Finish	Duration	Var	% Var
1	Process Unit Manufacturing	2/9/09	3/15/10	400	7/30/08	5/28/10	668	268	67.00%
2	In-Advance Testing / Ship	3/16/10	6/11/10	88	5/29/10	10/29/10	154	66	75.00%
	Total			488			822	334	68.44%

Chart III.4, PAR Schedule Variance

PAR Delay Measurements (2007 Baseline vs. January 2012 Update)									
No.	Delay Issue	As-Planned			As-Built			Variance	
		Start	Finish	Duration	Start	Finish	Duration	Var	% Var
1	Process Unit Manufacturing	3/25/09	3/31/10	372	7/30/08	10/31/09	459	87	23.39%
2	In-Advance Testing / Ship	4/1/10	7/2/10	93	11/1/09	9/24/10	328	235	252.69%
	Total			465			787	322	69.25%

The PAD and PAR procurement was explicitly designed to be a pilot procurement. MOX Services chose “to pilot these units ... based on their small size and relative simplicity in comparison to other process units.”¹¹⁵ Throughout the pilot, MOX Services endeavored to capture the pitfalls and successes in the context of an actual process unit procurement in order to assess and test, among other things, the accuracy, usability and completeness of the designs, and the constructability of the units to the NRC standards.¹¹⁶

The subcontract to fabricate and assemble the PAD and PAR process units was awarded on September 18, 2008, and the units were delivered to the MFFF site on or about August 2009. On September 24, 2010, MOX Services issued “PAR/PAD Process Unit Fabrication, Assembly, and Test Pilot Project: Lessons Learned/Process Improvement Report.”¹¹⁷ The Report includes a staggering 67 distinct Lessons Learned, grouped into seven areas that cover the entire procurement process – from the unit designs to soliciting

¹¹⁴ The as-built dates and duration calculation are taken from the January 29, 2012 Schedule Update in MOX Services’ integrated Project schedule developed in Primavera P6 Professional Project Management.

¹¹⁵ Chris Livingston, LL-2010-251, PAR/PAD Process Unit Fabrication, Assembly, and Test Pilot Project: Lessons Learned/Process Improvement Report (Sept. 24, 2010) (“Pilot Procurement Lessons Learned”) at 3 (“Exhibit 34”).

¹¹⁶ *Id.*

¹¹⁷ *Id.* MOX Services incorporated the lessons from the PAD/PAR pilot into later process equipment solicitations. *Id.* at 4.

and selecting a vendor, fabrication, and assembly and testing, through project controls and management.

Moreover, the independent, DOE-commissioned “Root Cause Analysis of Cost Increases” on the MFFF, issued in May 2014, echoes many of the same themes as the Lessons Learned. The similarities among the two studies are telling in two respects. First, while the Lessons Learned was focused on prospectively addressing challenges in procuring process units, the Root Cause Analysis (“RCA”) retrospectively examined the cost increase drivers and the underlying causes of the cost increases. That the RCA discusses many of the same problems that were revealed in the Lesson Learned four years earlier establishes that, had the pilot procurements been conducted years earlier, the resulting higher cost estimates would have provided a sounder basis for the cost estimates.

Second, the RCA was issued approximately 3½ years after the Lessons Learned and examined the completed or in-process procurements of dozens of process units. The similarities of the causes in the later document to the lessons of the earlier one establishes that, even though the Lessons Learned applied to only two of the smallest, simplest units, the lessons from that exercise accurately could be exported to all of the process units. Therefore, the RCA strongly supports the conclusion that had DOE allowed MOX Services to conduct pilot procurements in 2003-04 (even on the very limited scale of the PAD/PAR pilot), the overall process unit cost and schedule estimate would have been much greater.

Virtually all of the lessons from the PAD/PAR pilot procurement have obvious cost and/or schedule implications, as confirmed in the Root Cause Analysis. A sample of the lessons learned and their analogs in the RCA follows.

PAD/PAR Design Lessons. Among the several design lessons, the pilot produced many more engineering change requests than anticipated, which triggered MOX Services to increase its Title III engineering staff.¹¹⁸ Had MOX Services conducted the pilot in 2003-04, the pilot would have highlighted the need for additional Title III resources and the difficulties and expense of implementing the French reference plant designs in the United States. The pilot beginning in late 2007 also revealed the need to revise commercial grade item evaluations and to create commercial grade acceptance requirements.¹¹⁹ It uncovered the need to augment MOX Services’ QA staff to help vendors meet the applicable quality requirements. Additionally, when DOE finally allowed MOX Services to conduct a pilot, MOX Services discovered that some glovebox tolerances could be relaxed without compromising safety or functionality.¹²⁰ Because this lesson was delayed, MOX Services had to revisit the tolerances applicable to all gloveboxes, causing what would have been avoidable rework.

¹¹⁸ Lessons Learned, Exhibit 34, at 8.

¹¹⁹ *Id.*

¹²⁰ *Id.* at 9.

The RCA cites many of the same difficulties, unaccounted for in the Option 1 estimate and definitization, with respect to the process unit designs. Regarding the difficulty of translating the French reference plant designs to the domestic MFFF, the study states that the Project “had an overly optimistic view of the ... level of effort required to complete the design, which was the result of the misconception that the French design could be directly applied to the MFFF.”¹²¹

Further, like the Lessons Learned, the RCA cited the difficulty encountered in identifying vendors that could meet the applicable nuclear quality standards. The Analysis states that the cost estimate “did not consider all of the costs for completing the design, procurement of materials and equipment to NQA-1 standards.”¹²² This pitfall, underappreciated at the time of the Option 1 proposal but evident in the PAD/PAR pilot, was accorded a separate section in the RCA. The Analysis is nearly identical to the Lessons Learned on this point. It states that the estimate fell short by underestimating the “added cost charged by vendors to meet NQA-1 requirements,” and that MOX Services’ costs for assisting vendors in meeting nuclear standards “was also not properly accounted for in the CD-2/3 cost estimate.”¹²³

The RCA also cites as a cost increase driver the overly tight tolerances that emerged from a direct replication of the French design to the domestic context. According to the Analysis, such “tolerances often proved unrealistic” for domestic vendors that were not accustomed to them.¹²⁴

The repeated theme of the RCA regarding design issues is not that MOX Services failed to perform well or to properly supervise its vendors, but that the difficulties of replicating the French design in the U.S. simply were not understood at the time of the Option 1 cost estimate. The similarity of the Lessons Learned to the RCA on these issues

¹²¹ Parsons, Longenecker & Associates, Root Cause Analysis of Cost Increases, Mixed Oxide Fuel Fabrication Facility and Waste Solidification Building, Savannah River Site, South Carolina, (May 23, 2014) (“RCA”) at 2-8, 2-17 (stating that the belief that the French design easily could be adapted to the domestic MFFF “proved to be inaccurate and significantly underestimated the effort and costs required to Americanize the French design”) (“Exhibit 35”).

¹²² *Id.* at 2-12.

¹²³ *Id.* at 2-21; *see* DOE publication “NQA-1: An Overview for Federal Project Directors” at p. 12 (MFFF Federal Project Director Clay Ramsey stating that process equipment and construction vendors failed to appreciate how stringent NRC’s regulations are, and that, as a result, “A lot of unplanned effort has had to go into both the coaching and instruction of these suppliers, and the monitoring and oversight and additional inspection to make sure we’re getting what we’re supposed to get”) (“Exhibit 36”).

¹²⁴ RCA, Exhibit 35, at 2-18.

means that had MOX Services been allowed to conduct pilot procurements in 2003-04, what would later become cost increases would have been captured in the original cost estimate.

PAD/PAR Procurement Lessons. In vetting prospective vendors for the PAD/PAR units, MOX Services learned that many of them were not nearly as qualified as they had represented to MOX Services during the 2005 market assessment.¹²⁵ The pilot procurement revealed that, in fact, there was inadequate capability and capacity in the vendor community to provide the process units to the NRC's NQA-1 standards. If MOX Services had learned this before Option 1, it would have included in its estimate additional resources to assess vendors and assist them to meet quality standards. Also, it is a basic tenet of economics that lower supply with the same demand equals higher prices. It stands to reason, then, that MOX Services would have submitted higher process unit cost estimates upon realizing that the smaller universe of truly qualified process unit vendors would have more leverage in subcontract negotiations.

The Root Cause Analysis also observes that the capability of the vendor community to produce equipment to nuclear quality levels was weakened by decades of disuse. The Analysis acknowledges what was revealed in the PAD/PAR procurement: (1) the Project had difficulty finding vendors with demonstrated nuclear quality assurance programs to bid on work; (2) the bids of qualified vendors were much higher than expected; and (3) even capable process unit vendors had inadequate document management processes.¹²⁶

PAD/PAR Fabrication & Assembly Lessons. The pilot procurement unearthed a host of expensive fabrication and assembly challenges. These problems arose throughout the equipment procurement cycle, from solicitation preparation and vendor selection, through fabrication and assembly, and to documenting quality conformance before shipping finished equipment.

Among the cost- and time-intensive challenges that were not anticipated before the PAD/PAR pilots, MOX Services learned that the robustness of prospective vendors' NQA-1 programs was difficult to verify. In response, MOX Services added QA staff to the statement of work and vendor selection processes, with the goals to more efficiently process statements of work and to try to affirm vendors' abilities to meet NQA-1 standards.¹²⁷ The Root Cause Analysis validated this finding from MOX Services' initial procurement and concluded that had MOX Services anticipated the atrophy in vendors' NQA-1 programs, "the problems encountered due to lack of material and equipment availability in support of construction could have been prevented or mitigated." Such augmentation of QA staff would be costly, of course, but with the pilot procurements stalled until so late in the contract, these costs were not incorporated in the Option 1 estimates.

¹²⁵ Pilot Procurement Lessons Learned, Exhibit 34, at 10-11.

¹²⁶ RCA, Exhibit 35, at 2-21 to 2-22.

¹²⁷ Pilot Procurement Lessons Learned, Exhibit 34, at 15.

The Lessons Learned also revealed that MOX Services lacked the staff that would enable it quickly to address vendor assembly problems. Through the PAD/PAR pilot, MOX Services determined that, by adding field engineers at vendor shops, it could more timely address many of the fabrication and assembly issues that arose, rather than requiring production to stop while the vendor could consult with MOX Services engineers back at the Savannah River Site.¹²⁸ MOX Services also realized that, to remedy vendor misunderstandings as to nuclear industry requirements, it had to train vendors and add nuclear-experienced personnel to the process unit team.¹²⁹

The RCA echoed these fabrication lessons learned. The Analysis concluded that inadequate field engineering resources had been deployed on the MFFF and that this resulted in added costs when applied design changes on procured equipment could not keep pace with the Project's design evolution.¹³⁰ Consistent with the Lessons Learned document regarding other cost drivers of the MFFF Project, before the PAD/PAR pilot, MOX Services had no way of anticipating that more field engineers would be needed, and these added costs were not included in the Option 1 estimate or its definitization.

Moreover, the RCA, like the Lessons Learned, recognized the inefficiency inherent in requiring vendors to conduct long-distance exchanges with MOX Services in order to address design problems. The RCA noted that the "exchange with vendors over design problems and solutions was a time-consuming and costly design issue and appears to be a significant factor in the increased cost and schedule delays with equipment procurement."¹³¹ Again, the necessary costs and time of performing this additional work was not factored into the Option 1 estimates.

The Lessons Learned showed that additional MOX Services QA personnel had to be deployed to vendor shops following fabrication to ensure that the NQA-1 documentation required by NRC was complete and correct before equipment was shipped to the MFFF.¹³² Similarly, the RCA acknowledged the reduced effectiveness of vendors' NQA-1 programs and the need for unexpected funds to improve the vendors' abilities in this regard. As did the Lessons Learned, the RCA approved of MOX Services' decision to "provide direct in-shop assistance to vendors in implementing their NQA-1 programs," including assisting in training and reviewing and approving vendors' NQA-1 implementing procedures.¹³³ The Analysis

¹²⁸ *Id.* at 12.

¹²⁹ *Id.* at 12-13.

¹³⁰ RCA, Exhibit 35, at 2-24 to 2-25.

¹³¹ *Id.* at 2-18 to 2-19.

¹³² Pilot Procurement Lessons Learned, Exhibit 34, at 14.

¹³³ RCA, Exhibit 35, at 2-22.

found that the “need to provide such services were not anticipated when the CD-2/3 cost estimate was developed.”¹³⁴

Last, cost-increasing and schedule-prolonging problems with the process equipment were revealed when MOX Services assembled the PAD and PAR units at MOX Services’ assembly facility at the MFFF site. The PAD/PAR pilot showed that assembly craft workers at the Process Unit Assembly Facility (“PAF”) required a greater skill set than anticipated and thus required additional training or could demand higher wages, or both.¹³⁵ The RCA confirmed this lesson, concluding that craft labor with nuclear experience could demand higher hourly rates and overtime opportunities.¹³⁶

2. MOX Services Estimates that It Will Incur \$543,116,396 in Discrete Out-Of-Scope Costs Related to the Russian Parallelism Requirement

MOX Services has experienced significant additional scope from that included in the Option 1 Contract. To estimate the impact of this out-of-scope work, MOX Services has compared the estimates set forth in the 2007 Baseline to those in the 2012 Rebaseline with Addendum.¹³⁷ MOX Services Claims incentive fee based in part on an adjustment that adds \$543,116,396 in discrete out-of-scope costs to the Target Cost as of the 2012 Rebaseline with Addendum related to the Russian parallelism requirement, as set forth in the following chart.

¹³⁴ *Id.*

¹³⁵ Pilot Procurement Lessons Learned, Exhibit 34, at 18.

¹³⁶ RCA, Exhibit 35, at 2-26.

¹³⁷ It is appropriate and reasonable for this Claim to measure the impact by comparing the 2007 Baseline to the 2012 Rebaseline with Addendum. The 2007 Baseline carried forward the estimates contained in MOX Services’ Option 1 proposal, and the 2012 Rebaseline is the last comprehensive EAC that reflects a full funding profile through Project completion. In other words, the best estimate of the out-of-scope process unit-related costs are those developed for the 2012 Rebaseline, which incorporates approximately 4½ years of Project experience and significant hard data (actuals) from the 2007 Baseline.

Chart III.5, Direct Process Unit Cost Growth¹³⁸

Category Description	[A]	[B]	[C] = B - A	[D]
	2007 Baseline	2012 Rebaseline with Addendum	Cost Growth	Claim Growth
Process Unit Fabrication	\$ 234,510,584	\$ 589,956,954	\$ 355,446,370	\$ 345,578,075
Process Unit Assembly, Materials, and Supervision	83,887,205	185,032,060	101,144,856	100,569,601
Process Unit Title III Engineering	27,146,095	83,802,398	56,656,303	56,656,303
Subtotal	\$ 345,543,884	\$ 858,791,412	\$ 513,247,529	\$ 502,803,979
Quality Assurance Related to Process Units	\$ 4,049,445	\$ 29,703,639	\$ 25,654,194	\$ 25,654,194
Quality Assurance Related to Hotel Load	2,313,760	16,971,983	14,658,222	\$ 14,658,222
Subtotal - Quality Assurance	\$ 6,363,205	\$ 46,675,622	\$ 40,312,416	\$ 40,312,416
Total Process Unit Direct Cost Growth	\$ 351,907,089	\$ 905,467,034	\$ 553,559,945	\$ 543,116,396

The following sections describe each of the categories of process unit-related direct costs on which MOX Services incurred additional cost and for which the government is responsible. The discrete cost impacts of this added scope appear in four specific categories, each directly related to process unit construction engineering and manufacturing:

(1) fabrication, (2) assembly, (3) Title III Engineering, and (4) Quality Assurance.

a. Costs of added scope for process unit fabrication

Process Unit Fabrication refers to costs associated with planning, manufacturing, and process unit installation support to the construction of the MFFF.¹³⁹ The claimed out-of-scope costs for the fabrication of process units is the difference between their estimates set forth in the 2007 Baseline and in the 2012 Rebaseline with Addendum. The attached Schedule 3.1 and supporting Schedules referenced therein show MOX Services' claimed cost growth related to the vendors' cost to fabricate the process units.

The cost of the added scope for Process Unit Fabrication is contained in Functional Areas 1701-1715, and is summarized in the attached Schedule 3.1. In the 2012 Rebaseline with Addendum, MOX Services estimated that the added scope for the fabrication of process units would cost \$355,446,370 – 152% more than the 2007 Baseline estimate. As shown above, the pilot program for the PAD and PAR process units revealed an out-of-scope cost variance of 250% over the 2007 Baseline. If the pilot procurements had been conducted before the Option 1 estimate, MOX Services reasonably could have increased its cost estimate to reflect this variance. Armed with the knowledge of the true difficulty of Americanizing the French

¹³⁸ See Schedule 3.02.

¹³⁹ Proposal 12-004, Exhibit 10, at WBS Definitions 8704, 8750, 8764, and 8782.

reference plant designs,¹⁴⁰ MOX Services reasonably could have estimated that it would cost \$817 million or more to fabricate the process units.¹⁴¹ But this Claim takes a more conservative approach and is calculated in relation to the difference between the 2007 Baseline and 2012 Rebaseline with Addendum amounts.

The delta, or claimed out-of-scope work, between the 2007 Baseline and the 2012 Rebaseline with Addendum is \$355,460,370. But in this portion of the Claim, MOX Services claims entitlement to an adjustment adding only \$345,578,075 of this amount to the determination of estimated costs for incentive fee entitlement purposes. This \$9,868,295 downward adjustment (plus additional ongoing costs that accrue after the preparation of this Claim) primarily represents the increased costs associated with the deferment of work by vendors on 23 contracts.¹⁴²

b. Costs of added scope for process unit assembly, materials, and supervision

Process Unit Assembly, Materials and Supervision includes the costs for materials, labor and overhead associated with each of the process units assembled in the PAF.¹⁴³ The cost of the added scope in this category is \$101,144,856, and is detailed, by cost account, in Schedule 3.2 and the Supporting Schedules referenced therein. Of this amount, \$76,837,175 consists of (1) purchased equipment components, such as glove ports, window panels, and fasteners, and (2) finished equipment subsystems, such as pellet presses, homogenizers, conveyors, hoppers, and pellet grinders.¹⁴⁴ The remaining \$24,307,681 in this category

¹⁴⁰ It bears repeating that the PAD and PAR units were chosen for the eventual pilot procurements because they were among simplest process units. Pilot Procurement Lessons Learned, Exhibit 34, at 3.

¹⁴¹ Extrapolating to all process units the 250% variance encountered on the PAD and PAR units to the estimates generated on all process units would produce an estimate of well over \$800 million. ($\$233,376,860 \times (1 + 250\%) = \$816,819,010$.)

¹⁴² Additionally, MOX Services has deducted \$38.4 million from the total cost variance for process unit work scope that MOX Services inadvertently omitted from the Option 1 estimate. PCN 08-0211, dated December 8, 2008, identified \$44.5 million in costs associated with specific process units that were mistakenly not included in Option 1. As of the 2012 Rebaseline with Addendum, the cost accounts associated with these process units showed these estimates revised down to \$38.4 million. As of the 2012 Rebaseline with Addendum, the cost accounts associated with the process units showed cost growth in the amount of \$38.4 million. Because these costs cut across multiple cost accounts, this reduction is taken at a bottom line.

¹⁴³ Proposal 12-004, Exhibit 10, at WBS Definitions 8601, 8602, 8791, and 8795. These costs include materials procured under BOAs and those classified as Long Lead Procurements. *Id.* at WBS Definition 8791.

¹⁴⁴ *Id.* at WBS Definition 8795.

consists of MOX Services' labor and overhead costs for the Process Unit Design and Commissioning ("PUDC") Group, including supervision, administrative support, project controls, and PAF construction.¹⁴⁵ MOX Services claims entitlement to an adjustment to the Target Cost adding \$100,569,601 of this amount.

MOX Services estimates it will incur these out-of-scope costs due to increased vendor costs to manufacture materials used in the assembly of process units and the vendors' inability efficiently to perform the assembly scope of work. In order to mitigate these out-of-scope costs, MOX Services established the PUDC Group to provide vendor oversight, to provide rapid responses to vendor questions occasioned by the challenges presented by the unique process unit requirements of the Project, and to self-perform some of the process unit assembly. In addition, MOX Services built the PAF to house this work, which itself incurred modest cost increases.¹⁴⁶

c. Costs of added scope for process unit Title III Engineering

Process unit Title III Engineering refers to, among other things, engineering support for process unit fabrication, resolution of design issues, and, engineering supervision for process unit installation by the construction group.¹⁴⁷ MOX Services estimated as of the 2012 Rebaseline that it would incur out-of-scope costs of \$56,565,303 for these services. The attached Schedule 3.3 summarizes MOX Services' out-of-scope costs by cost account for Process Unit Title III engineering.

The amount claimed here reflects out-of-scope costs resulting both from needing more process unit Title III engineers to be on the Project and from needing them longer than estimated in the 2007 Baseline. Both of these impacts were identified from the PAD and PAR pilot programs.¹⁴⁸ The 2007 Baseline estimated that the Project would require \$27,146,095 in process unit Title III engineering over the course of six years. But, as of the 2012 Rebaseline with Addendum, MOX Services estimated that these services would require \$83,802,398 over a period of ten years.

d. Costs of added scope for Quality Assurance for process units

MOX Services will incur \$40,312,416 in out-of-scope, self-performed quality assurance (QA) work and hotel load specifically related to process units.¹⁴⁹

¹⁴⁵ *Id.* at WBS Definitions 8601, 8602, 8645, 8785, and 8795.

¹⁴⁶ *Id.* at WBS Definition 8785.

¹⁴⁷ *Id.* at WBS Definitions 8033, 8043, and 8056.

¹⁴⁸ Pilot Procurement Lessons Learned, Exhibit 34, at 8.

¹⁴⁹ The QA cost accounts are based on QA function, not the construction function on which QA services in question are performed. As a result, the characterization and allocation of QA cost growth is based on estimates provided by MOX Services' QA personnel. Thus,

The September 2010 PAD and PAR Lessons Learned noted that quality control at the vendor shops was inadequate, resulting in conformance issues after receipt of the process units at MOX Services. Specifically, the Commercial Grade Item Evaluations and the Commercial Grade Acceptance Requirements were poorly understood by vendors, resulting in non-conformance reports upon receipt of the process units.¹⁵⁰ In order to remedy these issues at the vendor shops, the Lessons Learned called for QA to be involved at the vendor locations to perform physical checks on the process units and to conduct final document review for NQA-1 compliance on the equipment to be shipped.¹⁵¹ Additionally, the Lessons Learned stated that the lack of QA involvement in the Statement of Work (“SOW”) review process resulted in unnecessary delays. This resulted in QA taking responsibility for the SOW documents and signing off on them during the preparation phase of the work.

3. MOX Services Estimates that It Will Incur \$781,849,714 in Additional Hotel Load Related to the Russian Parallelism Requirement

Over half of MOX Services’ added work scope between the 2007 Baseline and the 2012 Rebaseline with Addendum is due to delays in the process unit procurement cycle. The critical path of the MFFF was controlled by the process units from the 2007 Baseline through the funding constraints applied during the development of the 2012 Rebaseline with Addendum. MOX Services incurred \$781,849,714 in time-related costs, or Hotel Load, occasioned by the approximately 42 month schedule extension that these delays caused.

Chart III. 7, Hotel Load Process Unit Cost Growth¹⁵²

	[A]	[B]	[C] = B - A	[D]
Category Description	2007 Baseline	2012 Rebaseline with Addendum	Cost Growth	Claim Growth
Hotel Load	\$ 799,014,425	\$ 1,612,646,690	\$ 813,632,265	\$ 781,849,714

As described in Section III.E.1 above, the duration estimates on the PAD and PAR process units in the 2007 Baseline (made without the benefit of pilot procurements) fell far short of their actual durations. The 2007 Baseline estimated that to manufacture, test and ship the PAD unit would take 488 calendar days and the PAR unit would take 465 calendar

while MOX Services knows it experienced \$145,856,514 in cost growth on QA cost accounts, it estimates the allocation of that growth to process units (\$25,654,194), hotel load (\$14,658,222), and construction effort (\$105,544,098), based on the percentage of each QA cost account that MOX Services personnel attributed to those categories.

¹⁵⁰ Pilot Procurement Lessons Learned, Exhibit 34, at 8.

¹⁵¹ *Id.* at 14-15.

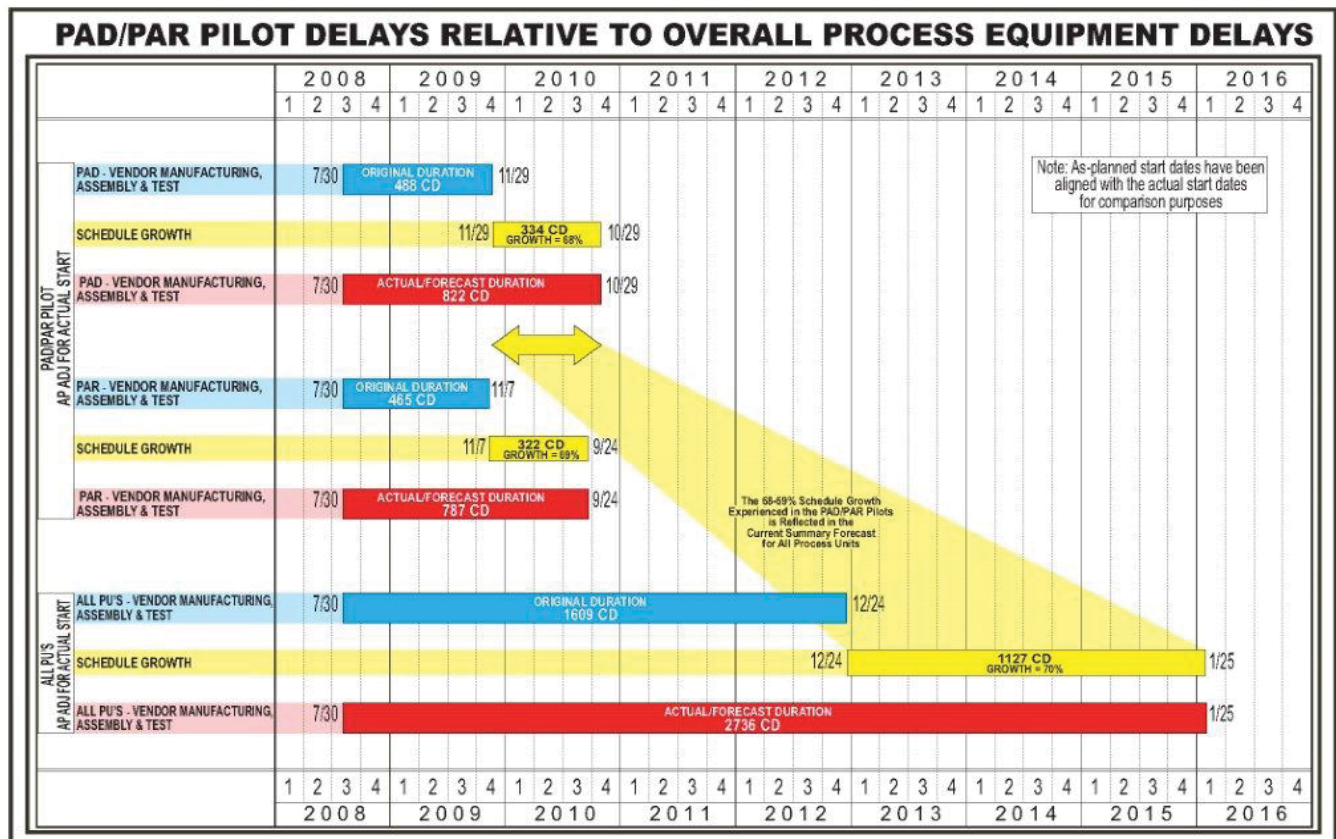
¹⁵² *See* Schedule 3.02.

days. In fact, the as-built durations to complete these processes took 822 and 787 calendar days, respectively. These extended durations constituted nearly a 70% schedule variance.

As with the discrete out-of-scope costs of the process units, the schedule-stretching delays caused by the challenges encountered during the manufacturing, assembly and testing of the process units were a product of DOE's refusal to allow MOX Services to conduct pilot procurements. Had MOX Services been allowed to pilot process units before submitting its Option 1 proposal, it would have known that the estimated process unit procurement cycle durations were unrealistically short. Thus, the resulting Hotel Load costs are "related to" the Russian parallelism requirement and so are explicitly beyond the scope of the Option 1 Contract.

Overall, the out-of-scope schedule growth experienced by the Project on all process units has been remarkably similar to that of the PAD and PAR units. Whereas the 2007 Baseline estimated the duration for all process units to be 1,609 calendar days, this estimate had increased as of the 2012 Rebaseline to 2,736 calendar days – a 70% variance. The following graphic, which adjusts the actual start dates for comparative purposes, illustrates this out-of-scope schedule expansion.

Chart III.8, Pilot Procurement and Overall Process Unit Delays



a. The Process Units Were on the MFFF Critical Path Throughout the Period of Claimed Hotel Load

The critical path of a project refers to the “longest chain of interrelated activities in the project schedule,” such that “any delay in completing an item on the critical path delays the entire project.” R. Nash, Jr., and S. Schooner, *The Government Contracts Reference Book*, p. 160 (3d ed. 2007). In terms of the Option 1 Contract, therefore, the critical path refers to scheduled activities that, if delayed, would cause a corresponding delay in delivering the MFFF through cold start-up testing.

From the early days of the U.S. MFFF Project, MOX Services advised DOE that certain process units were on the critical path. In September 2000, MOX Services informed DOE that delays in the delivery of certain equipment “will directly affect the construction schedule critical path.”¹⁵³ This document stated that based on the French reference plants’ experience, the procurement of the subject units should begin before construction started, which was then slated for March 21, 2003.¹⁵⁴ The PAD, PAR, and Jar Storage and Handling (“NTM”) process units were among the 60 or so units subject to this recommendation.¹⁵⁵ Later, in a July 2003 presentation to DOE, MOX Services noted that the “fabrication schedule of many units are on the critical path.”¹⁵⁶

Beginning in May 2008, the MFFF Monthly Status Reports’ critical path sections consistently highlighted one or more process units as controlling the end date of Option 1. Process units remained in the critical path reports until at least mid-2012 (at which point funding constraints imposed by NNSA started to make critical path analyses impossible). Specifically, the Monthly Status Reports from May 2008 through December 2008 demonstrate that at that time the critical path was controlled by the Homogenization and Pelletizing (“NPG”) process unit.¹⁵⁷ The reports showed the Sintering Furnace (“PFE”) unit to be critical from January 2009 through January 2010.¹⁵⁸ And from February 2010 through May 2012, the reports indicated that the PFE, NTM, NPG and Cladding and

¹⁵³ Letter DCS-DOE-000365 from Ed Brabazon, MFFF Engineering Manager, Duke Cogema Stone & Webster, to James V. Johnson, Technical Manager, DOE (Sept. 11, 2000) at 6 (“Exhibit 37”). In this document, “long lead procurements” were defined as “equipment procurements that, due to the time frame required to design, manufacture and test, the equipment would impact the construction schedule if the procurement is not initiated in advance of the construction installation subcontract.” *Id.* at 4.

¹⁵⁴ *Id.* at 5.

¹⁵⁵ *Id.* at Attachment 1.

¹⁵⁶ DCS Recommendation, Exhibit 26, at 2.

¹⁵⁷ See May 2008 Monthly Status Report at 33 of 57 (“Exhibit 38”); Dec. 2008 Monthly Status Report at 31 of 56 (“Exhibit 39”).

¹⁵⁸ See January 2009 Monthly Status Report at 32 of 58 (“Exhibit 40”); January 2010 Monthly Status Report at 40 of 67 (“Exhibit 41”).

Decontamination (“GME”) units, among others, controlled the critical path.¹⁵⁹ Further, the May 2012 Monthly Status Report stated that only 43 of 334 gloveboxes had been received and that “a number of equipment deliveries continue behind contract dates affecting follow-on activities.”¹⁶⁰ This Report also stated that “MOX Services continues optimizing startup logic sequences for the equipment delays driving critical path.”¹⁶¹

In addition to the contemporaneous self-reports from MOX Services, a review of the historic scheduling data on the Project demonstrates that the process units were on the critical path for the entire period addressed here. The early Monthly Status Reports from April 2007 (the first report under the 2007 Baseline) to April 2008 stated that the MFFF concrete structure controlled the critical path.¹⁶² In fact, as shown graphically below, the significantly longer delays experienced on the process unit procurements than those on the concrete structure meant that, from the start of the 2007 Baseline period, the process units actually controlled the critical path.

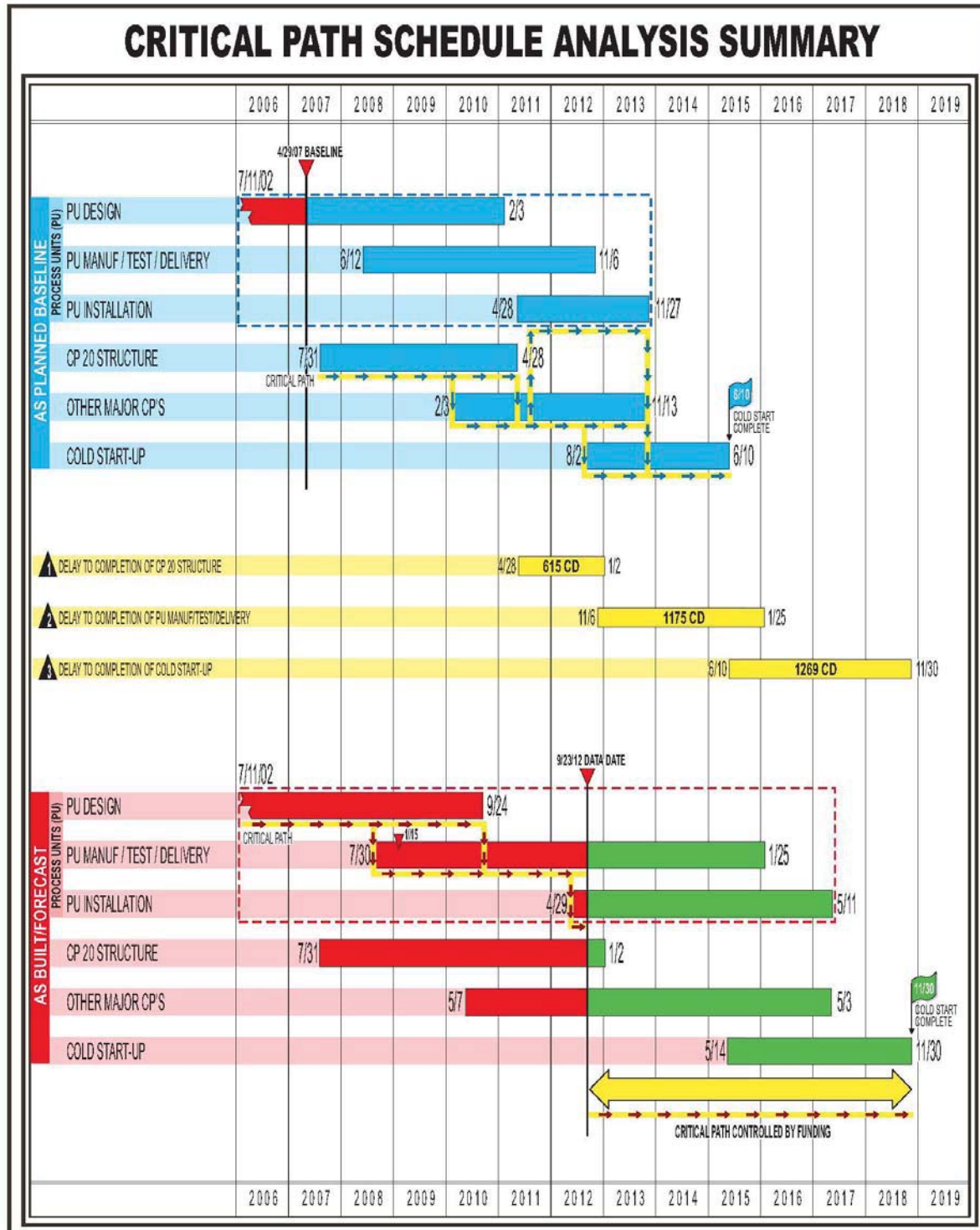
¹⁵⁹ See February 2010 Monthly Status Report at 38-39 of 69 (“Exhibit 42”); May 2012 Monthly Status Report at 50-51 of 66 (“Exhibit 4”).

¹⁶⁰ May 2012 Monthly Status Report, Exhibit 4, at 5 of 66.

¹⁶¹ *Id.*

¹⁶² See April 2007 Monthly Status Report at 27 of 43 (“Exhibit 43”); April 2008 Monthly Status Report at 33 of 56 (“Exhibit 44”).

Chart III.9 Critical Path Schedule



The “Critical Path Schedule Analysis Summary” shows in blue that the 2007 Baseline predicted that the critical path would be controlled throughout Option 1 by the MFFF structure (the CP 20 concrete structure package, then “other major construction packages,”

and finally, cold start-up). In fact, principally due to the significantly longer delays in process unit manufacturing (1,175 days) than the CP 20 structural package (615 days), the process units actually controlled the critical path from the 2007 Baseline until at least fall 2012. The as-built critical path, in red, shows the critical path controlled initially by the process unit design, and then concurrently by that design and the process unit manufacturing.

MOX Services started the construction of the concrete structure on August 6, 2007, only six days later than scheduled.¹⁶³ Yet, vendor manufacturing in the normal course (*i.e.*, not counting the piloted units) did not start until January 15, 2009, or 217 days later than its scheduled start in the 2007 Baseline.¹⁶⁴ Moreover, emphasizing the process units' early appearance on the critical path, MOX Services experienced significant duration expansion on some process units in the earliest phase of the procurement cycle – design conformance.¹⁶⁵ The design conformance on the NTM glovebox unit was scheduled to take MOX Services 3,079 engineering hours to complete over a period of 260 days.¹⁶⁶ MOX Services actually incurred 18,675 engineering hours in performing design conformance on the NTM. *See* Appendix “NTM Engineering Hours.” The process started 65 days late and took 372 days longer than planned to complete, and it represented an overall delay of 437 days.¹⁶⁷

¹⁶³ PRIMAVERA A (data April 29, 2007) (shows “MILESTONE – Begin MOX Bldg Slab PKG 20” scheduled to begin on July 31, 2007) (“Exhibit 45”); PRIMAVERA B (data date January 29, 2012) (shows “Begin Construction – CP 20” to have occurred on August 6, 2007) (“Exhibit 46”).

¹⁶⁴ PRIMAVERA C (data date April 29, 2007) (shows “Process Unit Manufacturing - SDK” scheduled to begin on June 12, 2008) (“Exhibit 47”); PRIMAVERA D (data date September 23, 2012) (shows “NBX * GB1000 – Vendor Fab Glovebox” to have occurred on January 15, 2009) (“Exhibit 48”).

¹⁶⁵ “Design conformance” refers to the scope of work necessary to review and modify design documents to address changes to issued designs due to safety assessments, DOE technical reviews, and other causes. PCN 04-0074 at 1.13 (“Exhibit 49”).

¹⁶⁶ The Equipment Group Completion Plan appended to PCN 04-0074, Rev. 1 (July 12, 2005), (“Exhibit 50”), shows 3079 hours of planned NTM design conformance. *See* Basis of Estimate, MFFF Equipment Group Base Engineering, NTM-JAR Storage & Handling, Work Package 8319.01, .02 and .03, (October 2004) (“NTM Basis of Estimate (October 2004)”) (“Exhibit 51”) at 1. PRIMAVERA E (data date April 29, 2007) (shows “Complete Design Conformance for NTM” scheduled to begin on October 2, 2007, and finish on June 17, 2008 – a duration of 260 days) (“Exhibit 52”).

¹⁶⁷ PRIMAVERA F (data date January 29, 2012) (shows “Str Conform Design CO – NTM” to have begun on December 6, 2007, and to have ended on June 26, 2009) (“Exhibit 53”). The NTM is one of the more complicated process units, consisting of 33 interconnected gloveboxes enclosing dozens of equipment systems. *See* Exhibit 51, NTM Basis of Estimate (October 2004) at 1. But, the great delays experienced in design conformance on this unit

The combination of as-scheduled concrete construction and challenging, delayed process equipment procurement would continue and become more pronounced as the Project progressed. For example, MOX Services completed the first floor concrete slab on February 6, 2009 – only 2 calendar days later than estimated in the 2007 Baseline.¹⁶⁸ MOX Services started the 3rd floor slab on January 5, 2010 – only 168 calendar days behind schedule.¹⁶⁹ During this same period, process unit procurement was significantly delayed. The January 2010 Monthly Status Report included in the Summary Schedule section a forecast of December 18, 2013, for the completion of “Glovebox Fabrication, Assembly/Shipment.”¹⁷⁰ This forecast represents 531 days of delay when compared to the July 5, 2012 end date for this activity, as shown in the April 2007 Monthly Status Report, which reflects the 2007 Baseline.¹⁷¹

By the time of the 2012 Rebaseline, the construction of the concrete structure was scheduled to be complete on January 2, 2013.¹⁷² While this represented a 616 calendar day delay,¹⁷³ by this point the process unit procurements were delayed 1,175 calendar days and were not estimated for delivery until January 25, 2016.¹⁷⁴

highlights the difficulty of updating and modifying the French reference plant designs for use in the U.S. MFFF.

¹⁶⁸ PRIMAVERA G (data date April 29, 2007) (shows “COMPLETE Slab MOX SLAB-ON-GRADE” scheduled to finish on February 4, 2009) (“Exhibit 54”); PRIMAVERA H (data date September 23, 2012) (shows “COMPLETE BMP 1st FL SLAB” to have occurred on February 6, 2009) (“Exhibit 55”).

¹⁶⁹ PRIMAVERA I (data date April 29, 2007) (shows “Start Install BMP 3rd Floor” scheduled to begin on June 21, 2009) (“Exhibit 56”); PRIMAVERA J (data date January 29, 2012) (shows “START BMP 3rd FLOOR SLAB” to have occurred on January 5, 2010) (“Exhibit 57”).

¹⁷⁰ January 2010 Monthly Status Report, Exhibit 41 at 39 of 67.

¹⁷¹ See April 2007 Monthly Status Report, Exhibit 43 at 26 of 43.

¹⁷² PRIMAVERA K (data date September 23, 2012) (shows “COMPLETE CONSTRUCTION RELEASE -3 (Roof All Areas Complete)” scheduled to finish January 2, 2013) (“Exhibit 58”).

¹⁷³ PRIMAVERA L (data date April 29, 2007) (shows “COMPLETE MOX BLDG Roof” scheduled to finish on April 28, 2011) (“Exhibit 59”).

¹⁷⁴ PRIMAVERA M (data date April 29, 2007) (shows “Available at Site – KLI” scheduled for November 6, 2012) (“Exhibit 60”); PRIMAVERA N (data date September 23, 2012) (shows “KLO – Available for Site (MFFF)” scheduled for January 25, 2016) (“Exhibit 61”).

b. Hotel Load: Translating Schedule Scope Growth into Costs

MOX Services identifies time-related costs as Hotel Load,¹⁷⁵ and captures this data in its Project Management Control System (“PMCS”). The PMCS complies with the contract and all applicable FAR clauses.¹⁷⁶ In its Option 1 estimate, MOX Services specified positions that were needed to support various areas of the Project and calculated the number of hours that would be incurred on an annual basis.¹⁷⁷ For example, a Project Controls Manager was included in the estimate to manage and direct all of the functions within the purview of her organization. The estimate for this position was developed by calculating the number of hours that would be incurred over the course of the Project, from October 1, 2006 through CY 2013, which totaled 13,280 hours. These hours were combined with other positions within the Project Controls group. The total estimated hours for this group was 197,690.¹⁷⁸

Essentially, Hotel Load costs are incurred to maintain the Project’s ability to perform. While Hotel Load may include some activities that advance the Project by preparing for activities to be performed, Hotel Load generally does not involve activity that demonstrates visible progress toward a deliverable. For purposes of this Claim, the Hotel Load cost claim includes general Hotel Load costs and excludes cost accounts specifically related to process units and construction, which have been claimed as discrete items.

On a project with the tremendous scope and complexity of the MFFF, Hotel Load costs can approach \$200 million per year. As shown in the following chart of MFFF Hotel Load, for example, actual Hotel Load costs have ramped up from \$65,717,532 per year in FY07 to \$141,488,442 per year in FY12. According to the 2012 Rebaseline, Hotel Load costs are estimated to average about \$160 million per year through FY18. The following

¹⁷⁵ The DOE defines Hotel Loads as a term used to “identify the cost associated with level of effort activities and fixed costs that will be incurred until a given piece of work is complete,” such as direct management and administration costs, and “indirect costs that are not part of direct production activities.” Department of Energy, Risk Management Guide (Jan. 12, 2011) (“Risk Management Guide”) at Attachment 15: Glossary 15-4 (“Exhibit 62”). MOX Services’ estimating approach for Hotel Load is consistent with the methodology described by the DOE in its Cost Estimating Guide. Department of Energy, Cost Estimating Guide, (May 9, 2011) (“Cost Estimating Guide”) at 21 (“Exhibit 63”).

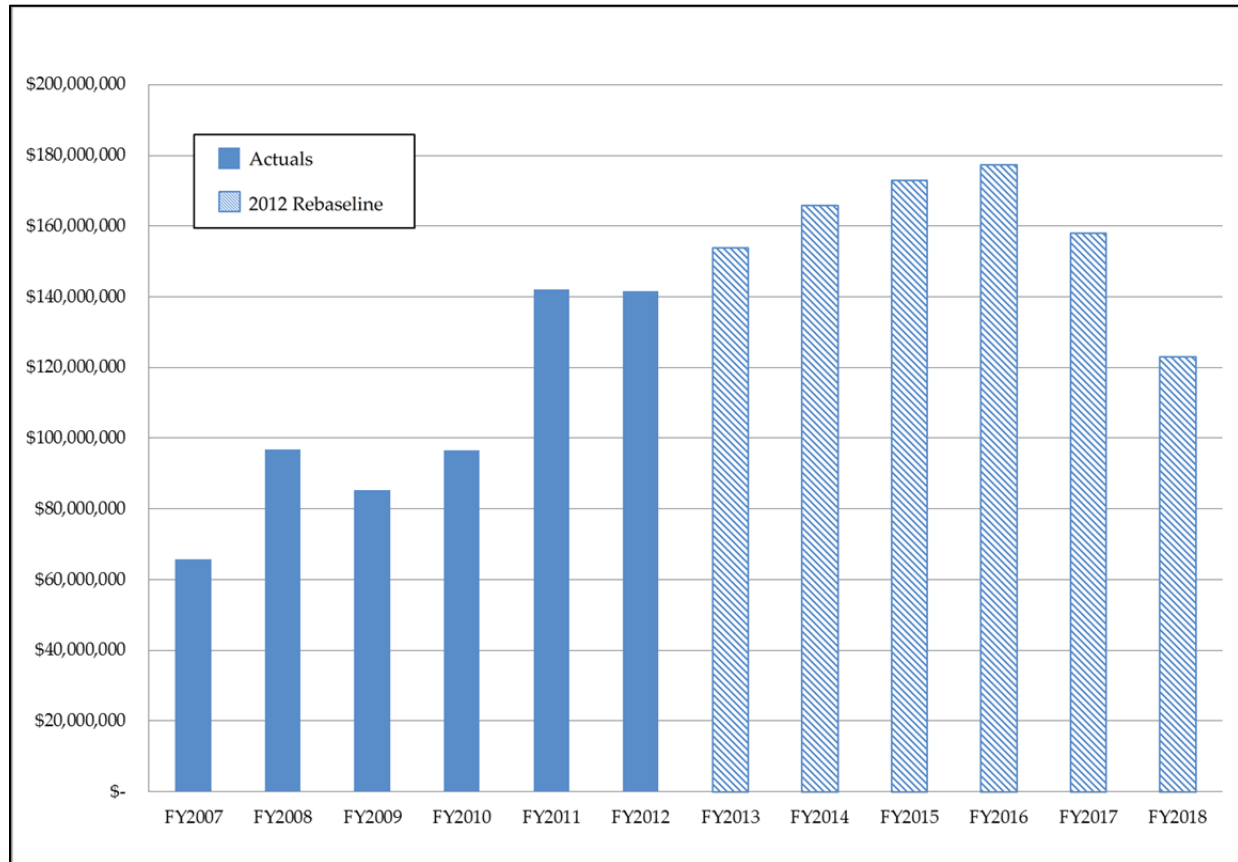
¹⁷⁶ As detailed in its CASB Disclosure Statement, MOX Services’ financial accounting operations are subject to DCAA review and conform to all GAAP and CASB requirements. *See* Duke Cogema Stone & Webster, Option 1 Proposal (March 15, 2006) (“Option 1 Proposal”) at 3-77, Exhibit 30.

¹⁷⁷ The DOE likewise acknowledges that level-of-effort activities increase Hotel Load costs. *See* Risk Management Guide, Exhibit 62, at 15-4, 15-5.

¹⁷⁸ Basis of Estimate for Management Area 06, Cost Account 6010 (Feb. 6, 2006) (“Exhibit 64”).

chart, compiled from data in the 2012 Rebaseline, shows MOX Services' estimated Hotel Load costs beyond the 2007 Baseline's estimated Project completion date in FY14.

Chart III.10 Hotel Load Over Time



MOX Services' estimated general Hotel Load costs grew \$813,632,256 – from \$799,014,425 to \$1,612,646,690 – between the 2007 Baseline and the 2012 Rebaseline with Addendum. The majority of this cost growth was in Project Management (\$393,718,692), which includes costs for the overall Project management and administrative tasks to support the Option 1 Contract.¹⁷⁹ This cost growth also includes cost growth in Title III Engineering (\$168,535,980), Temporary Facilities & Services (\$130,502,143), Cold Startup (\$63,901,948), and ES&H Program Management (\$28,987,513). This cost growth does not include \$34.8 million of Hotel Load cost for scope of work performed under the Base Contract or costs borne directly by or passed through to DOE, such as Management Area 90 costs for utilities and local support services at the Savannah River Site.¹⁸⁰ Cost growth associated with MA 21 (Other Project Costs – Operations Preparation) in the amount of \$29.8 million has also been excluded from the claimed cost growth because it does not exceed the amount incorporated into the Contract in Mod. 162 for unexercised scope. For

¹⁷⁹ Option 1 Proposal, Exhibit 64, at 1-2 (Cost Proposal).

¹⁸⁰ Proposal 12-004, Exhibit 10, at WBS Definitions at 0901.

this Claim, the NRC costs also are not being claimed. These adjustments result in cost growth of \$781.8 million, and MOX Services is entitled to an adjustment of the Target Cost in this amount.

Chart III.11, Process Unit Hotel Load Cost Growth By Management Area¹⁸¹

Management Area	Management Area Description	[A]	[B] 2012 Rebaseline with	[C] = B - A	[D]
		2007 Baseline	Addendum	Cost Growth	Claim Growth
06	Project Management	\$ 210,374,596	\$ 604,093,287	\$ 393,718,692	\$ 393,718,692
10	Title III Engineering	113,795,288	282,331,268	168,535,980	168,535,980
11	Regulatory Affairs	127,897,513	126,060,888	(1,836,625)	-
18	Temporary Facilities & Services	67,767,805	198,269,948	130,502,143	130,502,143
20	Cold Startup	12,510,010	76,411,958	63,901,948	63,901,948
21	(OPC) Operations Preparation	240,996,730	270,819,345	29,822,615	-
22	ES&H Program Management	25,672,483	54,659,996	28,987,513	28,987,513
Subtotal		\$ 799,014,425	\$1,612,646,690	\$ 813,632,265	\$ 785,646,275
Less: Non-DCS Costs					3,796,561
Total					\$ 781,849,714

The majority of this scope growth appears in Project Management (MA 06), which, in terms of cost, increased \$393.7 million. This management area includes costs for the overall project management and administrative tasks to support the Option 1 contract. The scope growth in this area reflects the impact of schedule delay and, to a lesser degree, the change whereby MOX Services self-performed additional activities. The attached Schedule 3.42 summarizes the unplanned cost growth by cost account for each relevant Management Area.

¹⁸¹ See Schedule 3.41.

CB&I AREVA MOX Services, LLC.
Process Unit Scope Change Claim Summary

Schedule 3.0

	[A]	[B]	[C] = B - A	[D]
	<u>2007 Baseline</u>	<u>2012 Rebaseline with Addendum</u>	<u>Cost Growth</u>	<u>Claim Growth</u>
Process Units Claim Costs	\$ 1,150,921,514	\$ 2,518,113,724	\$ 1,367,192,210	\$ 1,324,966,109

Sources:

Schedule 3.02

Schedule 3.01

CB&I AREVA MOX Services, LLC.
Process Unit Scope Change Claim By Category

Category Description	Cost Growth	Claim Growth
Process Unit Fabrication	\$ 355,446,370	\$ 345,578,075
Process Unit Assembly, Materials, and Supervision	101,144,856	100,569,601
Process Unit Title III Engineering	56,656,303	56,656,303
Subtotal	\$ 513,247,529	\$ 502,803,979
Quality Assurance - Process Units/Hotel Load	\$ 40,312,416	\$ 40,312,416
Total Process Unit Direct Cost Growth	\$ 553,559,945	\$ 543,116,396
Hotel Load	\$ 813,632,265	\$ 781,849,714
Process Units Total	\$ 1,367,192,210	\$ 1,324,966,109

Sources:

Schedule 3.02

Notes:

(1) In total, Claim Quality Assurance cost growth is \$145,856,514. Our analysis estimates that \$40,312,416 of this cost growth relates to Process Units and Hotel Load. (See Schedule 4.1 series)

CB&I AREVA MOX Services, LLC.
Process Unit Scope Change Claim - Cost Growth

	[A]	[B]	[C] = B - A	[D]	
Category Description	2007 Baseline	2012 Rebaseline with Addendum	Cost Growth	Claim Growth	Support Schedule
Process Unit Fabrication	\$ 234,510,584	\$ 589,956,954	\$ 355,446,370	\$ 345,578,075	Schedule 3.1
Process Unit Assembly, Materials, and Supervision	83,887,205	185,032,060	101,144,856	100,569,601	Schedule 3.2
Process Unit Title III Engineering	27,146,095	83,802,398	56,656,303	56,656,303	Schedule 3.3
Subtotal	\$ 345,543,884	\$ 858,791,412	\$ 513,247,529	\$ 502,803,979	
Quality Assurance Related to Process Units	\$ 4,049,445	\$ 29,703,639	\$ 25,654,194	\$ 25,654,194	Schedule 4.11
Quality Assurance Related to Hotel Load	2,313,760	16,971,983	14,658,222	\$ 14,658,222	Schedule 4.11
Subtotal - Quality Assurance	\$ 6,363,205	\$ 46,675,622	\$ 40,312,416	\$ 40,312,416	
Total Process Unit Direct Cost Growth	\$ 351,907,089	\$ 905,467,034	\$ 553,559,945	\$ 543,116,396	
Hotel Load	\$ 799,014,425	\$ 1,612,646,690	\$ 813,632,265	\$ 781,849,714	Schedule 3.4
Grand Total	\$ 1,150,921,514	\$ 2,518,113,724	\$ 1,367,192,210	\$ 1,324,966,109	

Schedule 3.1

CB&I AREVA MOX Services, LLC.
Process Unit Fabrication Summary

	[A]		[B]		[C] = B - A	
<u>Category Description</u>	<u>2007 Baseline</u>		<u>2012 Rebaseline with Addendum</u>		<u>Cost Growth</u>	<u>Support Schedule</u>
Process Unit Fabrication	\$	234,510,584	\$	589,956,954	\$ 355,446,370	Schedule 3.11
<u>Less: Adjustments</u>						
Process Unit Deferment & Associated Costs					\$ 9,846,767	Schedule 3.13
Non-DCS Costs					21,528	Schedule 3.12
Total Claim Growth					<u><u>\$ 345,578,075</u></u>	

CB&I AREVA MOX Services, LLC.
Process Unit Fabrication - By Cost Account

Schedule 3.11

Cost Account	Cost Account Description	[A]	[B]	[C] = B - A
		2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1701.8701	KCB - Homogenization - Sampling	1,934,236	6,458,691	4,524,455
1701.8702	KCC - PuO2 Decanning	1,924,402	4,993,127	3,068,725
1701.8703	KDA - PUO2 Decanning	3,627,549	19,430,268	15,802,719
1701.8704	KDM - Pre-Polishing Milling	9,462,891	32,784,460	23,321,569
1701.8705	KDR - Recanning	1,901,161	218,211	(1,682,950)
1701.8706	KPA GB 4010	1,004,520	2,531,529	1,527,009
1701.8751		-	-	-
1701.8777	KPG - Sampling Automatic	2,299,639	6,950,492	4,650,853
1701.8795		(2,786,631)	-	2,786,631
1702.8707	KCB 5000 Manufacturing	672,204	650,769	(21,435)
1702.8708		-	-	-
1702.8709		-	-	-
1702.8710		-	-	-
1702.8711		-	-	-
1702.8712	VDR - Filter Dismantling	1,768,495	61,433	(1,707,062)
1702.8713	VDU - Maintenance & Mechanical Dismantling	1,145,133	20,269	(1,124,864)
1702.8714		-	-	-
1703.8715	DCM - PuO2 3013 Storage	2,035,711	7,020,517	4,984,806
1703.8716	DCP - PuO2 Receiving	6,463,066	6,290,272	(172,794)
1703.8717	KDA - PUO2 Decanning (EQ - 6000 Density Measurement)	639,873	804,180	164,307
1703.8718		-	-	-
1703.8719		-	-	-
1704.8720	SDK - Rod Inspection and Sorting	2,941,521	2,373,011	(568,510)
1704.8721	SEK - Helium Leak Test	729,118	1,737,208	1,008,090
1705.8722	GMK - Rod Tray Loading	982,195	1,162,390	180,195
1705.8723	SCE - Rod Scanning	2,444,526	3,424,860	980,334
1705.8724	SMK - Rod Tray Handling	2,112,509	2,488,168	375,659
1705.8725	STK - Rod Storage	1,863,442	4,226,278	2,362,836
1705.8726	SXE - X Ray Inspection	2,095,947	2,365,417	269,470
1705.8727	TAS - Assembly Handling and Storage	1,113,247	9,358,223	8,244,976
1705.8728	TCK - Assembly Dry Cleaning	362,720	745,981	383,261

CB&I AREVA MOX Services, LLC.
Process Unit Fabrication - By Cost Account

Schedule 3.11

Cost Account	Cost Account Description	[A]	[B]	[C] = B - A
		2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1705.8729	TCL - Assembly Final Inspection	2,008,889	1,275,021	(733,868)
1705.8730	TGJ - Reserve Pit	2,010,346	358,421	(1,651,925)
1705.8731	TCP - Assembly Dismensional Inspection	1,608,930	2,087,795	478,865
1705.8732	TGM - Assembly Mockup Loading	3,651,566	2,896,012	(755,554)
1705.8733	TGV - Assembly Mounting	1,300,960	817,271	(483,689)
1706.8734	PSE - Green Pellet Storage	2,995,385	7,725,288	4,729,903
1706.8735	PSF - Sintering Pellet Storage	3,059,559	7,545,089	4,485,530
1706.8736	PSI - Scrap Pellet Storage	2,962,771	8,326,080	5,363,309
1706.8737	PSJ - Ground & Sorted Pellet Storage	3,013,168	8,700,651	5,687,483
1707.8738	Lab Equip - LRD/LPG/LBT/LAC/KLN/KLL/KLK/KLH	5,107,852	9,269,740	4,161,888
1707.8739	Lab Equip - LME/LAU/FLT	2,536,095	5,505,154	2,969,059
1707.8740	Lab Equip - LSR/LCP/KLJ	6,615,656	10,858,433	4,242,777
1707.8741	Lab Equip - LPS/LET/LER/LDS/KLM/KLF/KLB/KLC/KLD	6,827,803	13,008,455	6,180,652
1707.8742	Lab Equip - KLO/KLI/KLG/KLA/KLE	7,139,421	10,325,401	3,185,980
1707.8743	Lab Equip - LSG/LLI	419,067	641,331	222,264
1707.8744	Lab Equip - LFX	1,409,182	2,368,710	959,528
1708.8745	DCE - PUO2 Buffer Storage	2,172,985	11,862,545	9,689,560
1708.8746	GDE - Rod Decladding	1,043,388	3,778,042	2,734,654
1708.8747	GME - Rod Cladding and Decontamination	8,888,637	26,508,613	17,619,976
1708.8748	PAD - Preplanning	594,028	2,114,547	1,520,519
1708.8749	PAR - Preplanning	555,296	2,046,442	1,491,146
1708.8750	PML - Pellet Handling	6,826,152	26,530,210	19,704,058
1708.8751	PQE - Quality Control & Manual Sorting	3,300,657	7,432,755	4,132,098
1708.8752	PRE - Pellet Grinding	2,839,088	7,040,991	4,201,903
1708.8753	PRF - Pellet Grinding	2,839,088	6,926,812	4,087,724
1708.8754	PTE - Pellet Inspection & Sorting	1,222,670	5,806,075	4,583,405
1708.8755	PTF - Pellet Inspection & Sorting	1,216,910	5,693,786	4,476,876
1709.8756	DDP - UO2 Drum Emptying	1,261,619	2,858,233	1,596,614
1709.8757	LCT - Test Line (part of laboratory)	2,615,834	3,074,651	458,817
1709.8758	NBX - Primary Blend Ball Milling	1,399,068	3,817,183	2,418,115
1709.8759	NBY - Scrap Ball Milling	1,399,068	3,233,671	1,834,603

CB&I AREVA MOX Services, LLC.
Process Unit Fabrication - By Cost Account

Schedule 3.11

Cost Account	Cost Account Description	[A]	[B]	[C] = B - A
		2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1709.8760	NCR - Scrap Processing	5,294,395	9,035,233	3,740,838
1709.8761	NDD - PUO2 Can Receiving and Emptying	1,578,425	3,803,765	2,225,340
1709.8762	NDP - Primary Dosing	4,193,563	12,177,516	7,983,953
1709.8763	NDS - Final Dosing	5,122,007	15,225,662	10,103,655
1709.8764	NTM - Jar Storage and Handling	6,716,574	27,061,590	20,345,016
1709.8765	NXR - Powder Auxiliary	2,022,419	6,940,680	4,918,261
1710.8766	NPG - Homogenization & Pelletizing	3,917,028	14,407,626	10,490,598
1710.8767	NPH - Homogenization & Pelletizing	3,862,290	13,959,131	10,096,841
1710.8768	NPI - Homogenization & Pelletizing	3,873,576	2,312,137	(1,561,439)
1711.8769	KLA - Precipitation - Filtration - Oxidation	2,345,151	8,520,845	6,175,694
1711.8770	KCB GB1000 - Homogenization - Sampling	964,252	2,679,741	1,715,489
1711.8771	KDA - PUO2 Decanning	404,974	998,491	593,517
1711.8772	KDB - Dissolution	2,539,799	9,591,887	7,052,088
1711.8773	KDD - Dissolution of Chlorinated Feed	4,764,685	20,578,565	15,813,880
1711.8774	KDM - Pre-Polishing Milling (GB6400/7400)	786,781	1,380,592	593,811
1711.8775	KPA GB4000	1,928,637	3,378,746	1,450,109
1711.8776	KPB GB1000	681,155	1,777,821	1,096,666
1711.8777	KPG - Sampling Automatic	-	55,253	55,253
1711.8778	LLP - Pneumatic Transfer (33mm, PUO2 cans) Equipment	2,315,566	6,852,035	4,536,469
1711.8779	LTP - Pneumatic Transfer (76mm, PUO2 cans) Equipment	1,080,507	4,405,665	3,325,158
1711.8780	NTP - Pneumatic Transfer (133mm, PUO2 cans) Equipment	1,947,379	6,673,608	4,726,229
1712.8781	NPP - Additives Preparation	1,430,363	1,161,650	(268,713)
1712.8782	PFE/PFF - Sintering Furnace	24,950,333	71,472,962	46,522,629
1712.8783	TXE - Assembly Packaging	1,051,357	1,484,577	433,220
1712.8784	DRS - UO2 Receiving and Storage	152,633	-	(152,633)
1712.8786	PFF - Sintering Furnace	4	-	(4)
1713.8790	Process Unit Support	2,519,533	6,239,241	3,719,708
1713.8791	Assembly Suspense Accounts	-	-	-
1714.8708	KCD - Oxalic Mother Liquors Recovery Unit	857,872	742,665	(115,207)
1714.8709	KPA (GB2000, 2010, 3000, 8000, 8510) Purification Cycle	1,955,668	3,273,958	1,318,290
1714.8710	KPC - Nitric Acid Recovery Liquid Ring Pump GB	915,063	769,481	(145,582)
1714.8711	KWD - Aqueous Waste Reception	1,260,032	1,276,827	16,795

CB&I AREVA MOX Services, LLC.
Process Unit Fabrication - By Cost Account

Schedule 3.11

Cost Account	Cost Account Description	[A]	[B]	[C] = B - A
		2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1714.8714	KPB (GB2000) Solvent Recovery Unit	406,920	564,199	157,279
1715.8716	DCP - PuO2 Receiving	-	157,000	157,000
1715.8718	VDQ Waste Storage	3,069,408	639	(3,068,769)
1715.8719	VDT Waste Nuclear Count - Drum Hdling & NDA P	889,899	4,468,007	3,578,108
1745.4500	MP Dismantling Units	-	-	-
1745.4510	MP Receiving & Storage Units	-	-	-
1745.4520	MP Ball Milling & Pneumatic Transfers	-	-	-
1745.4530	MP Sintering Furnances	1,133,724	-	(1,133,724)
1745.4540	MP Powder & Pellets	-	-	-
1745.4550	MP Pellet Storage	-	-	-
1745.4570	MP Rodes & Assemblies	-	-	-
1745.4580	MP Assembly Packaging Crane	-	-	-
1745.4590	MP Laboratories	-	-	-
Total		\$ 234,510,584	\$ 589,956,954	\$ 355,446,370

Sources:

[A] and [B] Schedule 1.3

[C] Calculated

CB&I AREVA MOX Services, LLC.
Process Unit Fabrication - Non-DCS Cost Detail

				[A]	[B]	[C] = B - A
Cost Account	Cost Account Description	CE Code	CE Description	2007 Baseline	2012 Rebaseline	Cost Growth
1701.8704	KDM - Pre-Polishing Milling	ND	Non-DCS Cost	\$ -	\$ -	\$ -
1705.8725	STK - Rod Storage	ND	Non-DCS Cost	-	16,045	16,045
1707.8744	Lab Equip - LFX	ND	Non-DCS Cost	-	3,794	3,794
1711.8772	KDB - Dissolution	ND	Non-DCS Cost	-	845	845
1711.8773	KDD - Dissolution of Chlorinated Feed	ND	Non-DCS Cost	-	844	844
1713.8790	Process Unit Support	ND	Non-DCS Cost	-	-	-
Total				\$ -	\$ 21,528	\$ 21,528

Sources:

[A] May 2007 PRISM Data adjusted for budget transfers between July 2007 and September 2012

[B] 2012 contract proposal value as stated in December 2012 PRISM data and adjusted for 2012 Rebaseline Addendums

[C] Calculated

CB&I AREVA MOX Services, LLC.
Deferment Costs Rev 2

#	Company	Subcontract	TOR	Unit	[A]		[B]		[C]		[D]		[E]= B + C + D		[F]= A*.05		[G]= A*.05		[H]= E + F + G	
					Actuals		Projected through FY 15		Restart in FY 16		TOTAL COST of De-Obligation									
					Deferred Amount	Demob/Slowdown Costs	Storage Costs to Date	FY 15 - Storage Costs	Total Deferment Costs through FY 15 End	FY 16 - Remob Costs 5%	FY 16 - Escalation 2%	Total Estimated Cost of Deferment FY 15 + FY 16 Costs								
1	FNAG	10888-S-2528	000	PFE, PFF (10 GB)	\$ 10,009,639	\$ 4,049,957	\$ -	\$ -	\$ 4,049,957	\$ -	\$ -	\$ 4,049,957								
2	PCC	10888-B-2774	003	LFT (2 GB)	739,081	97,000	-	-	97,000	36,954	14,782	148,736								
3	SA Tech	10888-B-7617	001	Airlock Assemblies (5), Flanges (23)	120,274	25,333	9,762	2,405	37,500	6,014	2,405	45,919								
4	SA Tech	10888-B-7617	003	KLO Electrolyzer Assembly	727,286	22,200	8,642	14,546	45,388	36,364	14,546	96,298								
5	DMP	10888-B-4360	012	KLD, KLF, KLV, KLL, KLM, LAC, LBT, LPG (24 GB)	3,986,526	-	-	79,731	79,731	199,326	79,731	358,787								
6	Camberra	10888-S-3477	000	Laboratory Analyzers (Spectrometers)	1,284,248	-	-	25,685	25,685	64,212	25,685	115,582								
7	Petersen Inc.	10888-B-2766	021	DCM	4,477,639	-	-	89,353	89,353	223,882	89,353	402,988								
8	Petersen Inc.	10888-B-2766	025	DCE	6,079,878	-	-	10,368	10,368	303,994	121,598	435,999								
9	Diversified Metal Products	10888-S-4750	000	VDI	3,014,175	566	-	38,544	39,111	150,709	60,283	250,103								
10	Wright	10888-B-3429	007	T&S Units	2,637,178	326,167	127,330	127,330	580,827	131,859	52,744	765,430								
11	Diversified Metal Products	10888-B-4360	010	8 GB's deferred: KPA2000, 2010, 3000, KPC7000, KPB2000, KCD4000, KWD4000, 4010	965,176	33,000	5,200	5,200	43,400	200,000	-	243,400								
12	Byers Precision Fabricators	10888-B-6661	003	Suspended KLO: 02 DCR Pending Deletion.FX: 1 Suspended	696,328	-	39,000	18,000	57,000	34,816	13,927	105,743								
13	IP Systems, Inc.	10888-B-7630	001	LME Suspended	389,056	47,892	47,938	21,790	117,620	19,453	7,781	144,854								
14	IP Systems, Inc.	10888-B-7630	003	Suspended - KLC, KLI, KLN, LRD and LSR	1,607,726	31,664	47,938	21,790	101,392	80,386	32,155	213,933								
15	Petersen Inc.	10888-B-2766	015	PRF	1,296,274	36,312	7,992	1,512	45,816	19,644	25,925	91,385								
16	Petersen Inc.	10888-B-2766	017	Lab Frames	120,678	17,138	3,024	1,512	21,674	6,825	2,414	30,912								
17	Petersen Inc.	10888-B-2766	019	TAS	2,361,317	149,503	-	-	149,503	22,572	47,226	219,301								
18	Major Tool & Machine, Inc.	10888-B-2768	004	PTF	799,044	38,968	37,847	10,813	87,628	179,419	15,981	283,028								
19	Oregon Iron Works	10888-B-6660	001	GB Total PML: (57 GB - Received: 17 Balance: 40)	1,361,743	171,760	119,170	59,585	350,515	1,000,000	27,235	1,377,749								
20	Oregon Iron Works	10888-B-6660	003	KLH: 02, LET: 01, KLJ1: 03, KLJ2: 03, LDS: 03, LCP1: 02, LCP2: 02	1,811,663	75,645	32,501	16,250	124,397	90,583	36,233	251,213								
21	Oregon Iron Works	10888-B-6660	005	Suspended and DCR 13-0543 Deletion of LPS2: 4 GBs: LPS*GB2200, LPS*GB2300, LPS*GB2400 and LPS*GB2500	2,176,612	30,625	16,250	16,250	63,126	108,831	43,532	215,489								
					\$ 46,661,541	\$ 5,153,731	\$ 502,593	\$ 560,864	\$ 6,217,188	\$ 2,915,844	\$ 713,735	\$ 9,846,767								

Source:

See source file "Deferment Costs Rev 2.xlsx"

Notes:

(1) Numbers come from source file, not calculated based on 5% or 2% of deferred amount

Schedule 3.2

CB&I AREVA MOX Services, LLC.

Process Unit Assembly, Materials, and Supervision Summary

	[A]		[B]		[C] = B - A	
<u>Category Description</u>	<u>2007 Baseline</u>		<u>2012 Rebaseline with Addendum</u>		<u>Cost Growth</u>	<u>Support Schedule</u>
Process Unit Assembly, Materials, and Supervision	\$	83,887,205	\$	185,032,060	\$ 101,144,856	Schedule 3.21
<u>Less: Adjustments</u>						
Non-DCS Costs					575,255	Schedule 3.22
Total Claim Growth					\$ 100,569,601	

CB&I AREVA MOX Services, LLC.

Schedule 3.21

Process Unit Assembly, Materials, and Supervision - By Cost Account

Cost Account	Cost Account Description	[A]	[B]	[C] = B - A
		2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1716.8791	Assembly BOAs Accounts	\$ 10,629,229	\$ 50,274,011	\$ 39,644,782
1716.8795	Long Lead Procurements	16,050,885	49,105,674	33,054,789
1716.8796	ATG Spares Procurements	4,825,240	5,187,473	362,233
1717.8792	Self-Perform Suspense Accounts	318,024	726,190	408,166
1717.8793	Design Modifications	-	373,013	373,013
1717.8797	Unexpected Outsource Costs	-	192,886	192,886
1717.8798	Duty and Shipping Costs	-	2,461,227	2,461,227
1717.8799	REA Exposure	-	-	-
1717.87MA	Maintenance Program, Layup/In-Storage	-	340,078	340,078
Subtotal		\$ 31,823,378	\$ 108,660,553	\$ 76,837,175
1600.8601	Management / Admin	\$ 2,710,032	\$ 9,826,376	\$ 7,116,344
1600.8602	Project Controls	3,103,965	9,441,747	6,337,782
1600.8603	QA / QC	100,762	88,152	(12,610)
1601.8611	Business Travel	3,706,956	5,597,889	1,890,933
1602.8621	Supervision / Admin	2,114,941	4,493,560	2,378,619
1603.8631	Supervision / Admin	11,417,852	7,091,522	(4,326,329)
1603.8632	Job Living Expense	-	418,575	418,575
1603.8641	Management / Admin	(271,511)	-	271,511
1604.8641	Team Center Initiative	271,511	315,244	43,733
1605.8645	CA - NRC/CGIE - PUDC Support	-	5,663,563	5,663,563
1618.8748	PAD - Preplanning	-	-	-
1618.8749	PAR - Preplanning	-	-	-
1623.8785	Process Assembly Facilities	28,909,318	33,434,879	4,525,561
Subtotal		\$ 52,063,827	\$ 76,371,508	\$ 24,307,681

CB&I AREVA MOX Services, LLC.

Schedule 3.21

Process Unit Assembly, Materials, and Supervision - By Cost Account

Cost Account	Cost Account Description	[A]	[B]	[C] = B - A
		2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
Total		\$ 83,887,205	\$ 185,032,060	\$ 101,144,856

Sources:

[A] and [B] Schedule 1.3

[C] Calculated

CB&I AREVA MOX Services, LLC.
Process Unit Assembly, Materials, and Supervision - Non-DCS Cost Detail

				[A]	[B]	[C] = B - A
Cost Account	Cost Account Description	CE Code	CE Description	2007 Baseline	2012 Rebaseline	Cost Growth
1623.8785	Process Assembly Facilities	ND	Non-DCS Cost	\$ -	\$ 575,255	\$ 575,255
Total				\$ -	\$ 575,255	\$ 575,255

Sources:

[A] May 2007 PRISM Data adjusted for budget transfers between July 2007 and September 2012

[B] 2012 contract proposal value as stated in December 2012 PRISM data and adjusted for 2012 Rebaseline Addendums

[C] Calculated

Schedule 3.3

CB&I AREVA MOX Services, LLC.
Process Unit Title III Engineering - By Cost Account

Cost Account	Cost Account Description	[A]	[B]	[C] = B - A
		2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1004.8043	PUDC Site Construction Support	\$ 7,825,052	\$ 38,089,073	\$ 30,264,021
1005.8056	PUDC Startup Support	6,351,227	19,280,579	12,929,352
1003.8033	PUDC Procurement & Fabrication Support	2,266,768	11,010,319	8,743,551
1004.8045	Software	10,703,048	15,422,427	4,719,379
Total		\$ 27,146,095	\$ 83,802,398	\$ 56,656,303 ⁽¹⁾

Sources:

[A] and [B] Schedule 1.3

[C] Calculated

Notes:

(1) Due to the fact that there are no Non-DCS costs the total cost growth is equal to the total claim growth.

Schedule 3.4

CB&I AREVA MOX Services, LLC.
Hotel Load Summary

	[A]	[B]	[C] = B - A	[D]	
<u>Category Description</u>	<u>2007 Baseline</u>	<u>2012 Rebaseline with Addendum</u>	<u>Cost Growth</u>	<u>Claim Growth</u>	<u>Support Schedule</u>
Hotel Load	\$ 799,014,425	\$ 1,612,646,690	\$ 813,632,265	\$ 785,646,275	Schedule 3.41
<u>Less: Adjustments</u>					
Non-DCS Costs				3,796,561	Schedule 3.43
Total Claim Growth				\$ 781,849,714	

Schedule 3.41

CB&I AREVA MOX Services, LLC.
Hotel Load by Management Area

		[A]	[B]	[C] = B - A	[D]
Management Area	Management Area Description	2007 Baseline	2012 Rebaseline with Addendum	Cost Growth	Claim Growth
06	Project Management	\$ 210,374,596	\$ 604,093,287	\$ 393,718,692	\$ 393,718,692
10	Title III Engineering	113,795,288	282,331,268	168,535,980	168,535,980
11	Regulatory Affairs	127,897,513	126,060,888	(1,836,625)	-
18	Temporary Facilities & Services	67,767,805	198,269,948	130,502,143	130,502,143
20	Cold Startup	12,510,010	76,411,958	63,901,948	63,901,948
21	(OPC) Operations Preparation	240,996,730	270,819,345	29,822,615	-
22	ES&H Program Management	25,672,483	54,659,996	28,987,513	28,987,513
Subtotal		\$ 799,014,425	\$ 1,612,646,690	\$ 813,632,265	\$ 785,646,275
Less: Non-DCS Costs					3,796,561
Total					\$ 781,849,714

Sources:

[A], [B], [D] Schedule 3.42

[C] Calculated

Schedule 3.43 for Non-DCS Costs

CB&I AREVA MOX Services, LLC.

Schedule 3.42

Hotel Load Cost Growth - By Management Area and Cost Account

Cost Account	Cost Account Description	[A]	[B]	[C] = B - A
		2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
0601.6000	Project Office Operations	\$ 6,428,099	\$ 9,225,064	\$ 2,796,965
0601.6001	Communications	4,046,177	7,137,056	3,090,879
0601.6002	Special Projects	209,586	9,995,270	9,785,684
0601.6003	Employee Incentive Program	-	113	113
0601.6004	Project Off-Site Operations	2,145,784	11,006,133	8,860,349
0601.6005	Projects Oversight	6,630,465	16,667,313	10,036,848
0601.6009	Relocations	10,730,106	38,306,079	27,575,973
0602.6010	Project Controls	23,119,500	42,470,552	19,351,052
0602.6011	Risk Management	891,857	753,578	(138,279)
0603.6020	QA Program Management & Administration	1,451,615	1,437,299	(14,316)
0603.6021	Quality Engineering	2,718,261	2,861,506	143,245
0603.6022	Audit & Surveillance	1,379,395	1,363,028	(16,367)
0603.6023	Quality Control - Labor	2,177,354	2,400,403	223,049
0603.6024	QA / QC Assembly Group Support	775,405	536,953	(238,452)
0603.6025	MOX Potential Back Charges	-	222,526	222,526
0604.6030	PS&A Administrative Support	12,594,428	40,294,967	27,700,539
0604.6031	Human Resources	15,162,029	25,211,837	10,049,808
0604.6032	Training	8,271,079	20,542,206	12,271,127
0604.6033	Information and Personnel Security	8,404,946	18,575,630	10,170,684
0604.6034	Record Center	7,802,523	14,391,158	6,588,634
0604.6035	Internal Communication	(412,642)	134,969	547,611
0604.6036	Accounting, Treasury & Invoice Operations	12,049,569	24,577,396	12,527,827
0604.6037	Asset Management	359,916	359,715	(201)
0604.6038	Facility Management	3,635,905	22,202,181	18,566,276
0604.6039	Facility - Mini-MAC Building	-	123,501	123,501
0604.6042	PERC\$	-	818,632	818,632
0604.6045	Gateway Project	(20,000)	738,370	758,370
0604.6046	Shaw Nuclear Exchange	20,000	-	(20,000)
0604.6047	Legal Expenses	8,462,852	15,505,975	7,043,123
0604.6048	EMC Corporation Matter	1,555	1,557	2
0604.6049	952.204-77 Comp Security	873	699	(174)

CB&I AREVA MOX Services, LLC.

Schedule 3.42

Hotel Load Cost Growth - By Management Area and Cost Account

Cost Account	Cost Account Description	[A]	[B]	[C] = B - A
		2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
0605.6040	Contract Management & Administration	16,584,091	18,569,434	1,985,343
0606.6050	Procurement	3,725,526	8,809,637	5,084,111
0606.6051	Infrastructure Procurement	4,192,508	6,141,727	1,949,219
0606.6052	Construction Procurement	5,389,184	14,836,392	9,447,208
0606.6053	Process Equipment Procurement	8,811,049	16,683,838	7,872,789
0606.6054	Process Unit Procurement	433,523	464,936	31,413
0606.6055	Property Management	4,412,654	5,335,247	922,593
0606.6056	Employment Eligibility Verifications	2,400	851	(1,549)
0606.6057	Engineered Equipment Group	498,087	8,256,992	7,758,905
0606.6058	Procurement Corrective Action NRC Commercial Grade Dedication	-	-	-
0606.6059	Procurement Support Services	-	4,960,099	4,960,099
0606.6068	S&R and Warehouses	-	31,678,298	31,678,298
0606.6069	Materials Management	227,994	5,942,192	5,714,198
0607.6060	IT Support	9,194,965	47,929,477	38,734,512
0607.6061	IT Other Direct Costs (ODCs)	15,366,220	57,883,204	42,516,984
0607.6062	Team Center Initiative	1,999,755	2,116,187	116,432
0611.6000	Project Office Operations	-	833,463	833,463
0611.6001	Communications	-	1,164,936	1,164,936
0611.6002	Special Projects	-	1,270,591	1,270,591
0611.6004	Project Off-Site Operations	-	1,224,027	1,224,027
0611.6005	Projects Oversight	-	1,716,325	1,716,325
0611.6009	Relocations	-	1,138,970	1,138,970
0611.6090	Project Systems Assessment - NNSA (OPC)	500,002	239,770	(260,232)
0611.6091	EVMS Process Improvements Development ODC (OPC)	-	18,475	18,475
0612.6010	Project Controls	-	2,913,451	2,913,451
0614.6030	Program Support and Legal Administration	-	4,555,007	4,555,007
0614.6031	Human Resources	-	493,111	493,111
0614.6032	Training	-	3,519,268	3,519,268
0614.6034	Record Center	-	1,300,316	1,300,316
0614.6036	Accounting, Treasury & Invoice Operations	-	2,876,441	2,876,441
0614.6038	Facility Management	-	1,507,135	1,507,135

CB&I AREVA MOX Services, LLC.

Schedule 3.42

Hotel Load Cost Growth - By Management Area and Cost Account

Cost Account	Cost Account Description	[A]	[B]	[C] = B - A
		2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
0614.6047	Legal Expenses	-	1,665,825	1,665,825
0615.6040	Contract Management & Administration	-	2,043,913	2,043,913
0616.6050	Procurement	-	721,704	721,704
0616.6051	Infrastructure Procurement	-	532,976	532,976
0616.6052	Construction Procurement	-	1,654,810	1,654,810
0616.6053	Process Equipment Procurement	-	290,251	290,251
0616.6055	Property Management	-	1,305,869	1,305,869
0616.6057	Engineered Equipment Group	-	569,012	569,012
0616.6059	Procurement Support Services	-	412,851	412,851
0616.6068	S&R and Warehouses	-	1,319,145	1,319,145
0616.6069	Materials Management	-	510,097	510,097
0617.6060	IT Support	-	6,586,251	6,586,251
0617.6061	IT Other Direct Costs (ODCs)	-	4,239,122	4,239,122
MA 06 Subtotal		\$ 210,374,596	\$ 604,093,287	\$ 393,718,692
1000.8001	Management / Admin	\$ 8,574,626	\$ 20,831,188	\$ 12,256,562
1000.8002	Engineering Services Project Controls	3,588,904	9,548,015	5,959,111
1000.8003	Engineering Assurance	2,053,124	8,647,662	6,594,538
1000.8004	Technical Coordination	3,098,008	6,527,963	3,429,955
1000.8005	Document Management	819,754	3,991,953	3,172,199
1000.8006	Engineering Training	3,524,187	10,658,836	7,134,649
1001.8011	Business Travel	4,166,588	3,999,996	(166,592)
1001.8012	Temporary Assignments	125,319	10,500,723	10,375,404
1001.8019	Other ODCs	8,701,700	7,620,090	(1,081,610)
1002.8021	Supervision / Admin	1,359,305	1,349,621	(9,684)
1002.8022	Chemical	342,612	475,791	133,179
1002.8023	Mechanical	173,705	13,083	(160,622)
1002.8024	Laboratory	104,196	60,629	(43,567)
1002.8025	Balance of Plant (BOP)	21,323	37,924	16,601
1002.8026	Safety	158,936	73,015	(85,921)
1002.8027	Reference Plant Support	26,905	105,977	79,072
1003.8031	Supervision / Admin	5,030,543	4,537,192	(493,351)
1003.8032	Civil / Structural	2,691,947	40,575,130	37,883,183

CB&I AREVA MOX Services, LLC.

Schedule 3.42

Hotel Load Cost Growth - By Management Area and Cost Account

Cost Account	Cost Account Description	[A]	[B]	[C] = B - A
		2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1003.8034	Electrical / I&C Site Construction Support	4,801,717	29,183,333	24,381,617
1003.8035	Chemical-Construction Support	3,116,751	18,628,193	15,511,442
1003.8036	Mechanical – Construction Support	2,862,224	8,527,568	5,665,344
1003.8037	Plant Configuration Site Construction Support	5,465,749	9,041,717	3,575,968
1003.8038	Engineering Mechanics - Site Construction Support	1,588,640	20,330,086	18,741,446
1003.8042	Civil / Structural	-	-	-
1004.8041	Supervision / Admin	1,729,643	1,905,609	175,966
1004.8042	Civil / Structural	1,876,517	1,474,971	(401,547)
1004.8044	Electrical / I&C Procurement and Fabrication Support	1,194,353	2,595,894	1,401,541
1004.8046	Chemical-Procurement/Fabrication Support	6,775,218	19,644,386	12,869,168
1004.8047	Mechanical – Procurement/Fabrication Support	664,828	1,304,971	640,143
1004.8048	Plant Configuration - Construction, Procurement & Fabrication Support	2,982,901	5,747,615	2,764,714
1004.8049	Equipment Qualification	4,957,698	9,389,180	4,431,482
1005.8051	Supervision / Admin	1,046,687	649,247	(397,440)
1005.8052	Mechanical – Startup & Operations Support	4,210,942	189,407	(4,021,535)
1005.8053	Electrical / IC Startup and Operations Support	6,866,646	3,112,993	(3,753,653)
1005.8054	Civil/ Structural Startup Support	644,131	-	(644,131)
1005.8055	Engineering Mechanics Startup Support	786,719	-	(786,719)
1005.8057	Chemical/Mechanical Engineering Startup Support	2,039,416	548,121	(1,491,295)
1005.8058	Software Modifications	11,589,148	9,113	(11,580,035)
1005.8059	Plant Configuration	4,033,678	-	(4,033,678)
1006.8001	Management / Admin ODC	-	1,407,038	1,407,038
1006.8002	Project Controls OPC	-	262,767	262,767
1006.8003	Engineering Assurance ODC	-	446,932	446,932
1006.8005	Document Management	-	169,402	169,402
1006.8006	Engineering Training	-	131,226	131,226
1006.8011	Business Travel	-	5,563	5,563
1006.8049	Engineering Mechanics	-	925,155	925,155
1006.8052	Process Unit Responsible Engineer Startup Support	-	3,949,689	3,949,689
1006.8053	Electrical / IC Startup Support	-	3,540,890	3,540,890
1006.8054	Civil/ Structural Startup Support	-	1,226,667	1,226,667
1006.8055	Engineering Mechanics Startup Support	-	1,721,000	1,721,000
1006.8057	Chemical/ Mechanical Engineering Startup Support	-	5,571,346	5,571,346

CB&I AREVA MOX Services, LLC.

Schedule 3.42

Hotel Load Cost Growth - By Management Area and Cost Account

Cost Account	Cost Account Description	[A]	[B]	[C] = B - A
		2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1006.8059	Plant Configuration	-	1,136,403	1,136,403
MA 10 Subtotal		\$ 113,795,288	\$ 282,331,268	\$ 168,535,980
1100.8101	Management / Administration	\$ 1,496,757	\$ 2,227,893	\$ 731,136
1100.8102	NSA Project Controls	1,026,391	1,491,371	464,980
1101.8111	Business Travel	947,994	504,806	(443,188)
1101.8112	Temporary Assignments	178,491	55,790	(122,701)
1101.8119	Other ODCs (Legal & S/C Costs)	1,470,334	1,622,276	151,942
1102.8121	Defense of Licensing Basis	7,263,816	11,460,643	4,196,827
1102.8122	Compliance Program	3,412,700	2,054,829	(1,357,871)
1102.8123	Condition Reports Work Resolution	-	205,042	205,042
1103.8132	Chemical Safety Support	971,851	4,012,744	3,040,893
1103.8133	Laboratory Support	332,617	210,173	(122,444)
1104.8141	ES&H Program	219,560	1,229,596	1,010,036
1104.8142	Radiological Protection	13,298	5,869	(7,429)
1104.8143	Environmental Protection Program	713,022	823,040	110,018
1104.8144	Industrial Safety Program	380,343	638,299	257,956
1104.8145	Waste Management Program	(50,533)	334,145	384,678
1104.8146	Fitness for Duty Program	(216,463)	515,082	731,545
1104.8147	Emergency Response Program	80,657	94,698	14,041
1104.8148	Employee Safety Incentive Program	81,139	79,977	(1,162)
1104.8149	Construction - Safety Engineering Support	233,618	459,000	225,382
1105.8151	Criticality Safety Procurement & Const Support	81,672	4,035,676	3,954,004
1105.8154	Nuclear Radiation Protections	73,973	2,291,377	2,217,404
1105.8155	Nuclear Radiation & Criticality Monitoring	-	1,793	1,793
1106.8161	Defense of the Safety Basis	1,367,960	4,087,071	2,719,111
1109.8191	NRC Costs	18,764,920	57,777,922	39,013,002
1109.8192	Physical Security Program	75,562,597	12,193,107	(63,369,490)
1109.8193	Material Control & Accountability Program	13,490,799	13,452,777	(38,022)
1110.8101	Management / Administration	-	226,869	226,869
1110.8102	Project Controls	-	102,632	102,632
1112.8121	Defense of Licensing Basis	-	1,524,420	1,524,420
1113.8132	Chemical Safety Support	-	567,575	567,575

CB&I AREVA MOX Services, LLC.

Schedule 3.42

Hotel Load Cost Growth - By Management Area and Cost Account

Cost Account	Cost Account Description	[A]	[B]	[C] = B - A
		2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1115.8151	Criticality Safety Procurement & Const Support	-	951,357	951,357
1115.8154	Nuclear Radiation Protections	-	329,182	329,182
1116.8161	Defense of the Safety Basis	-	493,859	493,859
MA 11 Subtotal		\$ 127,897,513	\$ 126,060,888	\$ (1,836,625)
1802.8820	Supplies & Services	\$ 354,576	\$ 2,167,694	\$ 1,813,118
1802.8821	Office Equipment, Furniture Leases & Purchases	2,924,041	4,278,754	1,354,713
1803.8830	Temporary Site Features & Services	128,086	518,980	390,894
1803.8832	Buildings Shops / Trailers	15,839,261	22,521,397	6,682,136
1803.8833	Utilities & Services	14,684,284	45,585,905	30,901,621
1803.8850	Misc Field Construction Supplies	-	-	-
1804.8840	Equipment	12,689,446	43,706,780	31,017,334
1804.8842	Construction Materials Management	209,481	5,794,327	5,584,846
1804.8843	Tools	223,651	754,407	530,756
1804.8850	Temporary Site Features & Services	-	-	-
1805.8850	Miscellaneous Field Supplies & Services	17,474,277	72,941,704	55,467,427
1805.8851	Foreign National Escorts	3,240,702	-	(3,240,702)
MA 18 Subtotal		\$ 67,767,805	\$ 198,269,948	\$ 130,502,143
2000.9001	Management / Administration	\$ 7,999,319	\$ 12,719,516	\$ 4,720,197
2000.9002	Project Controls	1,319,146	1,844,714	525,568
2001.9014	Test Equipment & Consumables	1,762,350	1,910,308	147,958
2002.9021	Generic Test Documents	80,437	143,702	63,265
2002.9024	Technical Support	-	139,892	139,892
2002.9026	Cold Startup Training	1,348,758	1,211,069	(137,689)
2004.9047	Turnover & Logistics	-	2,852,716	2,852,716
2006.9060	Maintenance Program, Layup/In-Storage	-	4,473,849	4,473,849
2010.9101	Management / Administration - IPT	-	31,409,273	31,409,273
2010.9102	Project Controls - IPT	-	4,389,193	4,389,193
2010.9103	Program Support for Start-up	-	3,425,955	3,425,955
2011.9117	Spare Parts - IPT	-	3,630,728	3,630,728
2012.9124	Technical Support - IPT	-	2,130,381	2,130,381
2012.9126	Cold Startup Training - IPT	-	6,130,662	6,130,662

CB&I AREVA MOX Services, LLC.

Schedule 3.42

Hotel Load Cost Growth - By Management Area and Cost Account

Cost Account	Cost Account Description	[A]		[B]		[C] = B - A	
		2007 Baseline		2012 Rebaseline with Addendum		Cost Growth	
MA 20 Subtotal		\$	12,510,010	\$	76,411,958	\$	63,901,948
2100.9501	Management / Administration	\$	22,539,333	\$	22,482,010	\$	(57,323)
2100.9502	Project Controls		3,957,266		4,341,736		384,470
2100.9503	Quality Assurance		-		-		-
2100.9504	Environment, Safety & Health		-		-		-
2100.9506	PS&A		(0)		-		0
2101.9511	Business Travel		2,134,842		2,028,587		(106,255)
2101.9512	Temporary Assignments		3,183,717		6,462,252		3,278,535
2101.9515	Consumables		-		2,438,200		2,438,200
2101.9518	Software		4,114,132		3,954,314		(159,818)
2102.9522	Training at Richland		2,863,086		1,182,981		(1,680,105)
2102.9523	Training at LaHague		48,189,683		3,675,088		(44,514,595)
2102.9524	Training at Melox		64,791,905		5,648,433		(59,143,472)
2102.9525	Other Training		66,704,236		85,723		(66,618,513)
2102.9526	Operations Activities		(1,222,760)		157,198		1,379,958
2102.9527	Operations Process Simulator		8,646,253		1,584,317		(7,061,936)
2102.9528	Reference Plant Training Direct Costs		(8,646,253)		108,059,327		116,705,580
2103.9531	Organizational Documents		1,141,455		4,215,983		3,074,528
2103.9532	Laboratory Procedures		4,252,295		2,677,948		(1,574,347)
2103.9533	Maintenance Procedures		4,612,425		4,593,634		(18,791)
2103.9534	Operating Procedures		10,763,793		8,148,158		(2,615,635)
2103.9535	Hot Startup Planning		373,242		1,121,733		748,491
2103.9536	Turnover to Operations		454,344		-		(454,344)
2103.9537	Support to Other groups		920,976		7,136,528		6,215,552
2104.9541	Early Option 2 Proposal Development (Labor)		-		672,700		672,700
2105.9550	Aqueous Polishing Activities		259,640		3,216,088		2,956,448
2105.9551	Powder Pellet Activities		173,085		6,619,357		6,446,272
2105.9552	Rod Bundle Activities		129,730		2,473,008		2,343,278
2105.9553	Balance of Plant Activities		167,995		6,595,420		6,427,425
2105.9554	Laboratory Activities		-		14,901,345		14,901,345
2105.9555	Maintenance Activities		320,048		31,130,877		30,810,829
2105.9556	Logistics / Warehousing		-		2,675,586		2,675,586

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Schedule 3.42

Hotel Load Cost Growth - By Management Area and Cost Account

Cost Account	Cost Account Description	[A]	[B]	[C] = B - A
		2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
2105.9557	System Engineering Activities	172,262	12,540,813	12,368,551
MA 21 Subtotal		\$ 240,996,730	\$ 270,819,345	\$ 29,822,615
2201.8138	Relocation	\$ -	\$ 20,912	\$ 20,912
2201.8141	ES&H Program	1,473,688	8,149,431	6,675,743
2201.8143	Environmental Protection Program	1,134,848	5,433,744	4,298,896
2201.8144	Industrial Safety Program	995,294	930,909	(64,385)
2201.8145	Waste Management Program	924,451	3,318,918	2,394,467
2201.8146	Fitness for Duty Program	1,836,793	1,379,366	(457,427)
2201.8147	Emergency Preparedness Program	1,565,817	1,640,343	74,526
2201.8148	Employee Safety Incentive Program	519,249	1,053,890	534,641
2201.8149	ES & H Safety Engineer	1,783,459	11,290,726	9,507,267
2201.8150	Field Office Supplies	-	5,499	5,499
2201.8820	Field Office Supplies	171,293	90,217	(81,076)
2202.8141	ES&H Program	-	1,232,710	1,232,710
2202.8143	Environmental Protection Program	-	949,660	949,660
2202.8145	Waste Management Program	-	693,898	693,898
2202.8147	Emergency Response Program	-	599,081	599,081
2202.8148	Employee Safety Incentive Program	-	177,741	177,741
2202.8149	ES & H Safety Engineer	-	2,101,834	2,101,834
2202.9504	Radiological Protection Early Start Up	15,267,591	15,591,116	323,525
MA 22 Subtotal		\$ 25,672,483	\$ 54,659,996	\$ 28,987,513
Total		\$ 799,014,425	\$ 1,612,646,690	\$ 813,632,265

Sources:

[A] and [B] Schedule 1.3

[C] Calculated

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Hotel Load - Non-DCS Cost Detail

Cost Account	Cost Account Description	CE Code	CE Description	[A]	[B]	[C] = B - A	[D]
				2007 Baseline	2012 Rebaseline ⁽¹⁾	Cost Growth	Amount For Non-DCS Adjustment
0601.6001	Communications	ND	Non-DCS Cost	\$ 106,923	\$ 77,479	\$ (29,444)	\$ (29,444)
0602.6010	Project Controls	ND	Non-DCS Cost	-	13,793	13,793	13,793
0604.6038	Facility Management	ND	Non-DCS Cost	-	1,741,230	1,741,230	1,741,230
0607.6060	IT Support	ND	Non-DCS Cost	-	8,774	8,774	8,774
0607.6061	IT Other Direct Costs (ODCs)	ND	Non-DCS Cost	-	24,031	24,031	24,031
1002.8021	Supervision / Admin	ND	Non-DCS Cost	-	826	826	826
1003.8032	Civil / Structural	ND	Non-DCS Cost	-	80,702	80,702	80,702
1802.8820	Supplies & Services	ND	Non-DCS Cost	-	8,945	8,945	8,945
1802.8821	Office Equipment, Furniture Leases & Purchases	ND	Non-DCS Cost	878,862	1,248,289	369,427	369,427
1803.8832	Buildings Shops / Trailers	ND	Non-DCS Cost	416,368	885,285	468,917	468,917
1803.8833	Utilities & Services	ND	Non-DCS Cost	2,522,587	3,067,642	545,055	545,055
1804.8840	Equipment	ND	Non-DCS Cost	284,036	525,052	241,016	241,016
1804.8842	Construction Materials Management	ND	Non-DCS Cost	-	-	-	-
1804.8843	Tools	ND	Non-DCS Cost	-	-	-	-
1805.8850	Miscellaneous Field Supplies & Services	ND	Non-DCS Cost	298,460	586,712	288,252	288,252
2201.8144	Industrial Safety Program	ND	Non-DCS Cost	-	-	-	-
2201.8145	Waste Management Program	ND	Non-DCS Cost	-	9,075	9,075	9,075
2201.8146	Fitness for Duty Program	ND	Non-DCS Cost	-	6,211	6,211	6,211
2201.8148	Employee Safety Incentive Program	ND	Non-DCS Cost	-	6,346	6,346	6,346
2201.8149	ES & H Safety Engineer	ND	Non-DCS Cost	-	-	-	-
2202.9504	Radiological Protection Early Start Up	ND	Non-DCS Cost	-	13,405	13,405	13,405
1109.8193	Material Control & Accountability Program	ND	Non-DCS Cost	-	14,865	14,865	MA Not Claimed
2103.9532	Laboratory Procedures	ND	Non-DCS Cost	-	7,321	7,321	MA Not Claimed
2103.9537	Support to Other groups	ND	Non-DCS Cost	-	-	-	MA Not Claimed
Total				\$ 4,507,236	\$ 8,325,983	\$ 3,818,747	\$ 3,796,561

Sources:

[A] May 2007 PRISM Data adjusted for budget transfers between July 2007 and September 2012

[B] 2012 contract proposal value as stated in December 2012 PRISM data and adjusted for 2012 Rebaseline Addendums

[C] Calculated

[D] Equals column C except for cost accounts in Management Areas excluded from REA

Note:

(1) The 2012 Rebaseline Addendum trends did not include any Non-DCS Costs.

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Option 1 Hotel Load Costs

2012 Rebaseline Over Time

<u>Fiscal Year</u>	<u>2012 Rebaseline⁽¹⁾</u>
FY2006	\$ 68,349
FY2007	65,717,532
FY2008	96,710,540
FY2009	85,207,267
FY2010	96,487,076
FY2011	141,995,362
FY2012	141,488,442
FY2013	153,766,273
FY2014	165,798,423
FY2015	172,935,122
FY2016	177,279,277
FY2017	157,895,652
FY2018	122,887,527
FY2019	25,058,078
Total	\$ 1,603,294,920

Sources:

April 2014 PRISM data (FY 2006 - FY 2012)

2012 contract proposal value as stated in December 2012 PRISM data (FY 2013 - FY 2019)

Notes:

(1) See Schedule 3.42 for Option 1 Hotel Load costs by Management Area and Cost Account.

(2) The Hotel Load Costs over time does not include \$9,351,770 related to Rebaseline Addendum Trends 12-0773A and 12-0774B.

IV. CHANGE IN THE METHOD OF CONSTRUCTION PERFORMANCE

In awarding the Option 1 Contract, NNSA directed MOX Services to serve as a construction manager. In this role, NNSA prohibited MOX Services from self-performing construction; rather, NNSA's performance strategy called for MOX Services to hire fixed-price subcontractors to perform all Project construction. MOX Services based its cost estimates on NNSA's construction performance strategy. Further, MOX Services excluded the risk that NNSA's strategy might fail from its cost estimates and, therefore, from the scope of the Contract.

Ultimately, NNSA abandoned this performance strategy because not enough qualified subcontractors were willing and able to perform fixed-price construction work on this immensely complex, first-of-a-kind facility that was governed by the exacting nuclear standards called for in the Contract. As MOX Services' original cost estimates had been explicitly based on the assumption that qualified fixed-price subcontractors would be used, the abandonment of this strategy increased the scope and the cost of work of the Project. Through Modification 152, NNSA acknowledged the abandonment of the original construction performance strategy in two important ways.

First, Modification 152 removed the prohibition on MOX Services' self-performance of construction scope from the contract, reflecting the longstanding failure of NNSA's original strategy and the Agency's abandonment of it. No longer limited to the construction manager role, MOX Services would self-perform construction where doing so would be most cost-effective. But the change from NNSA's original strategy increased the Project costs because now MOX Services would be required directly to coordinate, schedule and supervise enormous amounts of craft labor instead of merely managing the fixed-priced subcontracts of capable vendors.

Second, Modification 152 removed NNSA's requirement that construction contacts be let exclusively on a fixed-price basis whenever practicable. The use of time and materials ("T&M") subcontracts, too, increased the amount and complexity of MOX Services' work. To ensure that the applicable NQA-1 quality standards were met, MOX Services deployed significant Quality Assurance/Quality Control resources to assist its subcontractors.

MOX Services is entitled to an increase in the Target Cost over the 2007 Baseline in the areas of Quality Assurance and Construction Management resulting from NNSA's failed construction performance strategy and subsequent change. As detailed in Section IV.D. below, MOX Services has computed the impact of these changes in these two areas based on the difference between the 2007 Baseline and the 2012 Rebaseline with Addendum.

The increased costs associated with the change in performance strategy was estimated to be \$258,614,864 as of the 2012 Rebaseline with Addendum, and MOX Services is entitled

to an increase in the Target Cost in this amount for the purpose of determining MOX Services' entitlement to Incentive Fee.¹ The costs are depicted in the following chart.

Chart IV.1, Total Construction Performance Strategy Cost Growth

	[A]	[B]	[C] = B - A	[D] = C
Category Description	2007 Baseline	2012 Rebaseline with Addendum	Cost Growth	Claim Growth
Quality Assurance	\$ 16,659,849	\$ 122,203,946	\$ 105,544,098	\$ 105,544,098
Construction Management	61,514,495	214,585,261	153,070,766	153,070,766
Construction Strategy Change Total	\$ 78,174,343	\$ 336,789,207	\$ 258,614,864	\$ 258,614,864

A. Contract Requirements

Throughout Option 1 NNSA has controlled and directed the construction performance strategy to be used by MOX Services. As initially awarded, the Contract limited MOX Services' role to that of a construction manager, prohibited MOX Services from performing any construction work with its own workforce, and required competitively bid fixed-price subcontracting to the maximum extent possible. MOX Services, in turn, based its estimated cost on this method of performance and the assumption that, in accordance with NNSA's strategy, adequate competition from qualified subcontractors would exist to drive down costs.

1. NNSA Required MOX Services To Perform Exclusively As Construction Manager And Prohibited MOX Services From Self-Performing Construction

At definitization, the Contract expressly barred MOX Services from self-performing construction work.² Specifically, clause H.7, "Construction Prohibition," stated that "[n]o construction work shall be awarded to the firm that designs the MOX Fuel Fabrication Facility or its subsidiaries or affiliates."³ The Construction Prohibition was so emphatic, that it could only be changed "with the approval of the Secretary."⁴

¹ See Schedule 4.01. Detailed schedules of the amounts established in this section of the Claim are found appended to this Section V as "Construction Strategy Change Schedules."

² See Exhibit 7, Mod 124, at J.1.40; *see also* Letter from James R. Bieschke, Contracting Officer, DOE, to Larry R. Barnes, President, Duke, COGEMA, Stone and Webster, LLC (July 20, 2005) ("Exhibit 65") at 2 ("Exercise of Unexercised Segments (Remainder) of Option 1").

³ Exhibit 7, Mod 124, at H.7.

⁴ *Id.*

For purposes of this clause, the term “construction” was broadly defined to include any activity required to erect and build the permanent plant, warehouse, and administrative facilities necessary to make the building habitable, as well as the systems and utilities needed for the processing systems to function appropriately.⁵

The Construction Prohibition did not extend to construction management.⁶ Instead, in accordance with the SOW, MOX Services would “perform construction management services and ensure the successful completion of functional check-out, and cold start-up of the facility.”⁷ Thus, under NNSA’s strategy MOX Services’ principal undertaking would consist of construction management activities.

2. NNSA Required MOX Services To Utilize Fixed-Price Construction Subcontractors To Achieve Cost Efficiency

In addition to prohibiting MOX Services from self-performing any construction activities on the Project, the SOW required MOX Services to compete the construction subcontracts on a fixed-price basis:

The Contractor shall not perform any construction with its own forces. All construction activities shall be procured on a competitive fixed-price basis to the maximum extent practicable.⁸

NNSA required the use of fixed-price subcontracting in order to generate competition and control costs.⁹ The Contracting Officer explained that “[t]he prohibition against the prime contractor performing construction was part of the original acquisition strategy” and that the purpose behind this construction performance strategy “was to minimize the government’s risk of cost growth.”¹⁰ Additionally, NNSA expected that “by competing the

⁵ *Id.*

⁶ *Id.* Clause H.7 expressly excluded construction management from the definition of “construction.” It stated, “This construction definition does not apply to construction management. Construction Management activities are not prohibited and may be performed by the prime contractor.”

⁷ Exhibit 7, Mod 124, at J.1.39 (Option 1 SOW “Construction Management Services”).

⁸ Exhibit 7, Mod 124, at J.1.40.

⁹ *See generally* Exhibit 19 (regarding Exercise of Option 1 and listing construction objectives, including procurement of “all construction activities on a competitive fixed-price basis to the maximum extent practicable”); *see also* Exhibit 7 at I.5 (incorporating by reference FAR 52.244-2 and FAR 52.244-5, calling for competition in subcontracting and the Government’s consent to subcontract).

¹⁰ Exhibit 18, Carol Elliott E-mail to Sue King, Oct. 20, 2008. In fact, the prohibition “was included in most of the acquisition strategy documents. It was also included [in] the action memo signed by the Secretary approving the contract award.” *Id.*

construction subcontracts, and awarding as many as possible on a fixed price basis ... the government would achieve the best prices.”¹¹

3. MOX Services’ Proposal Contemplated Only A Construction Management Role

MOX Services drafted its Technical and Cost Proposals to comply with the NNSA-directed construction performance strategy, including both the Construction Prohibition and the fixed-price subcontracting requirement.¹² MOX Services’ Technical Proposal outlined its construction management role and stated that construction efforts on the Project would be undertaken by fixed-price subcontractors.¹³ MOX Services included a basis of estimate for Construction Management that mirrored the work scope contemplated by its Technical Proposal.¹⁴

a. MOX Services’ Construction Management Plan

In its limited role as construction manager, MOX Services was responsible for contracting with and managing subcontractors.¹⁵ MOX Services’ Construction Management organization was “[r]esponsible for overall strategic direction, leadership, and integration for all construction site employees, subcontractors, and site activities.”¹⁶ MOX Services planned to undertake “effective management and coordination of the large number of onsite contractors and vendors.”¹⁷ MOX Services proposed to establish “the overall management

¹¹ *Id.*

¹² Exhibit 30, Option 1 Proposal, Volume I (Technical Approach) at 2-36, 2-37, 3-13 and Volume II (Cost Proposal - Executive Summary) at i (expecting to manage construction work through competitively awarded fixed price construction subcontracts).

¹³ *See id.*, Volume I (Technical Approach) at 2-36, 2-37.

¹⁴ *See id.*, Volume II (Cost Proposal) at 1-1, 1-2 and Work Breakdown Structure Element Definition for Utility Equipment & Piping (Cost Content explained as “Subcontract Effort: All-inclusive, firm fixed price contract for material, fees, and labor and installation costs”) and Work Breakdown Structure Element Definition for Electrical (Cost Content explained as “Subcontract Effort: All-inclusive, firm fixed price contract for material, fees, and labor and installation costs”).

¹⁵ *See* Exhibit 17, PEP, at ¶ 6.1.3. Incorporated by reference into the Contract, the Project Execution Plan outlines MOX Services’ “Subcontracting and Procurement Strategy.” *Id.* As part of this strategy, MOX Services intended to employ subcontractors to serve as general contractors for construction. *Id.* The Project Execution Plan explains that “[u]nlike a construction manager, a general contractor would execute a significant scope of its assigned work, and perhaps all of it, with its own forces.” *Id.*

¹⁶ Exhibit 30, Option 1 Proposal, Volume I (Technical Proposal) at 3-13.

¹⁷ *Id.* at 2-39 and 3-75.

and administrative requirements for construction” and to flow down those requirements to subcontractors and sub-tier suppliers.¹⁸ MOX Services also anticipated preparing guidance documents for subcontractors and vendors, specifying the expectations and requirements for communications, reporting, and coordination with other subcontractors.¹⁹ MOX Services would not have primary responsibility for Quality Assurance, but would “oversee and evaluate” subcontractor and supplier Quality Assurance plans and programs.²⁰ MOX Services anticipated developing QA/QC procedures and protocols, and performing QA audits of suppliers and subcontractors.²¹

b. MOX Services’ Construction Subcontracting Plan

MOX Services’ role as Construction Manager was reflected throughout its subcontracting plan. MOX Services planned to provide construction management and administration, QA, and related oversight.²² Its Construction Area Managers were tasked with managing and maintaining “the integration of all subcontractor activities, ensuring that the work is completed in a safe and efficient manner.”²³ They would also “monitor subcontractor activities for adherence to cost and schedule baselines,” to “coordinate and oversee all subcontract development, procurement, management of subcontractors, and subcontract closeout.”²⁴ But the primary construction work and its direct supervision, inspection and quality assurance would be the responsibility of the subcontractors themselves.²⁵

MOX Services expected that construction subcontractors, suppliers, and vendors would procure, erect, and install the facilities.²⁶ Its basis of estimate for Construction Management mirrored the work scope contemplated by its Technical Proposal. For example, the cost content included in MOX Services’ basis of estimate for piping, electrical, structural, and HVAC was based on the efforts of subcontractors operating under all-inclusive, firm

¹⁸ Exhibit 17, Project Execution Plan at ¶ 6.1.3.

¹⁹ Exhibit 30, Option 1 Proposal, Volume I (Technical Proposal) at 2-39 and 3-75.

²⁰ Exhibit 20, BCP #05-011 at 1.

²¹ *Id.*

²² *See generally* Exhibit 30, Option 1 Proposal, Volume I (Technical Proposal) at 2-36 (addressing MOX Services’ plan for Construction Management and Administration).

²³ *Id.* at 3-13.

²⁴ *Id.*

²⁵ *See id.* at Volume I (Technical Proposal) at 2-36 (explaining MOX Services’ construction subcontract strategy to include awarding competitive subcontracts to construction subcontractors to build the facilities).

²⁶ *See id.*

fixed-price contracts for material, fees and labor, and installation.²⁷ Moreover, MOX Services included a list of all planned fixed-price construction subcontracts in Exhibit 2-7 of its Technical Proposal.²⁸

4. NNSA Accepted The Risk That Its Strategy Might Fail

Wary that the complexity of this first-of-a-kind nuclear facility to be built under strict NRC regulations would severely limit the pool of capable subcontractors willing to take on fixed-price subcontracts, MOX Services sought to control the risk inherent in NNSA's chosen strategy. In preparing its cost estimate, MOX Services excluded from the scope of the Contract the risk that the performance strategy might fail. In its Basis of Estimate, MOX Services notified NNSA that the estimate depended on a sufficient number of capable fixed-price subcontractors materializing:

The estimate assumes an adequate number of suppliers, vendors and subcontractors with NQA-1 programs that have capacity and technical capabilities to support project schedule.²⁹

In addition, MOX Services' cost estimate assumed that subcontractors would bring their mature and compliant nuclear quality assurance programs to the Project.³⁰

This estimate assumes that the sub-contractors and their suppliers will have a compliant QA program which can be verified through audit prior to their initiation of work on the MFFF. Since the subcontractors and suppliers have not been selected and contracted, the effort needed to bring their QA programs to the level of a NQA-1 program is uncertain. Recent DOE project experience at the Hanford Vittrification Plant has indicated that finding qualified suppliers is problematic.³¹

During the Option 1 proposal evaluation, DOE's Project Controls Manager acknowledged these "key technical assumption(s)" included the assumption "that there are

²⁷ See, e.g., Exhibit 30, Option 1 Proposal, at Work Breakdown Structure Element Definition for Utility Equipment & Piping and Work Breakdown Structure Element Definition for Electrical.

²⁸ Exhibit 30, Option 1 Proposal, Volume I (Technical Proposal) at 2-37 (providing summary of major subcontracts for MFFF construction).

²⁹ Exhibit 20, BCP #05-011, MA 15 Basis of Estimate (pertaining to construction supervision of MFFF, Quality Assurance).

³⁰ See *id.*

³¹ *Id.*

manufacturing vendors with NQA-1 programs to provide adequate competition and scope implementation.”³²

B. Change In Contract Requirements: The NNSA-Directed Construction Performance Strategy Proved Unworkable

NNSA’s construction performance strategy failed because it could not be executed without substantial cost increases and unacceptable quality risks. Long after NNSA’s strategy failed, NNSA finally abandoned it and ultimately issued Modification 152 to formally eliminate the Contract’s Construction Prohibition provision, incorporating in its place a “Self Performance” provision, and eliminating the fixed-price subcontract mandate.

1. NNSA’s Construction Performance Strategy Failed To Generate Adequate Subcontractor Competition

Despite MOX Services’ diligent efforts, willing and capable subcontractors refused to bid on fixed-price contracts at cost-effective rates. On March 14, 2006, MOX Services advertised the structural concrete construction package on the Federal Business Opportunity website as well as the DCS MOX website.³³ Throughout the solicitation process, MOX Services’ Construction and Procurement team contacted 72 firms, sent the full RFP to eight pre-qualified firms,³⁴ and responded to 229 bidder questions.³⁵

MOX Services provided prospective structural concrete subcontractors with a detailed scope of work.³⁶ It explained that the structural subcontractor would be responsible for

³² DOE report “Technical Input for Cost Analysis” at 28 (July 28, 2006) (“Exhibit 66”). DOE confirmed its assumption of the risk in its paper, “NQA-1, An Overview for Federal Project Directors.” DOE’s document quotes Federal Project Director, Clay Ramsey:

What we did not allow for was that with the equipment suppliers who advertise that they have a NQA-1 program, those programs have sat on the shelf for many, many years...It would quickly become apparent that the suppliers really didn’t know what they were doing as far as NQA-1.

Exhibit 23 at 12.

³³ Letter DCS-DOE-002581 from David Stinson, President, Duke Cogema Stone & Webster to James Bieschke, Office of Acquisition and Assistance, DOE (July 31, 2006) (“DCS July 31, 2006 Letter”) (requesting authorization to use a cost plus incentive fee contract for structural concrete construction) (“Exhibit 67”).

³⁴ CP 20 Strategy (“Exhibit 68”).

³⁵ CP 20 Talking Points (“Exhibit 69”).

³⁶ See Section G (Summary of Work For The MOX Fuel Fabrication Building (BMF) Structural Scope of Work) (“Exhibit 70”).

supplying all of the labor, materials, equipment, and services necessary to construct the Project's main concrete structure, and that it must do so on a firm fixed-price basis.³⁷ Fifteen of the firms that expressed an interest in the structural concrete construction opportunity represented that they were pre-qualified for NQA-1 work,³⁸ but only six of them attended the pre-proposal conference, and only one of those submitted a proposal.³⁹

Although it resulted from a competitive process, the Kiewit Federal Group's ("Kiewit") June 2006 proposal for structural construction of \$393 million was more than double MOX Services' estimate of \$182 million.⁴⁰ MOX Services analyzed its estimate against Kiewit's proposal,⁴¹ and concluded that the disparity could not be reduced sufficiently to justify award on a fixed-price basis.⁴² Comparing its estimate and Kiewit's proposal, 60% of the Project and Project labor were in alignment.⁴³ The only areas left that could account for the substantial differences included risk, contingency for unknowns associated with work on a DOE facility, NRC regulations, unstable funding and escalation.⁴⁴ The magnitude of these concerns could not be adequately resolved or minimized to any meaningful extent through fixed-price contracting.

³⁷ *Id.* at ¶ 1.1.1.

³⁸ It is important to note that many of the prospective subcontractors did not have NQA-1 experience and MOX Services would later discover the limited scope of their qualifications. Some of the first clues of the lack of qualification of prospective subcontractors were in their pricing – they either grossly underestimated the quality requirements or included excessive contingency to compensate for their inexperience.

³⁹ *See* Exhibit 67, DCS July 31, 2006 Letter. The dearth of qualified subcontractors was well documented in contemporaneous Government reports and Peer Reviews. *See*, GAO Report GAO-14-231 ("Exhibit 71"). Recognizing the problem and looking ahead, MOX Services even initiated programs with local technical schools and high schools to offer 2-year technical degrees and craft training to mitigate the risk of a craft resource shortage. Exhibit 41, January 2010 Monthly Status Report.

⁴⁰ Exhibit 67, DCS July 31, 2006 Letter (requesting authorization to use CPIF contract for structural concrete construction).

⁴¹ *See* CP 20 Bid Analysis Rev. 2 ("Exhibit 72"); CP 20 Proposal vs. Estimate Discussion ("Exhibit 73"); CP 20 Unresolved Pricing Issues ("Exhibit 74"); Exhibit 69, CP 20 Talking Points Rev. 3.

⁴² *See* Exhibit 67, DCS July 31, 2006, Letter.

⁴³ *Id.*

⁴⁴ *Id.*

2. **MOX Services' Continuing Efforts To Execute NNSA's Failed Construction Performance Strategy & Request For Waiver Of That Strategy**

a. **MOX Services Sought Waiver Of SOW's Fixed-Price Subcontracting Requirement**

Upon receiving Kiewit's contingency-laden proposal, it was clear that NNSA's original strategy was unworkable, and so MOX Services requested DOE's authorization to use a cost plus incentive fee ("CPIF") contract in lieu of a firm fixed-price contract for the structural concrete construction package.⁴⁵ In its July 31, 2006 letter, MOX Services explained that using a CPIF type contract would help "significantly reduce the overall cost of this work by essentially removing all contingency ... included in Kiewit's proposal."⁴⁶ DOE did not approve MOX Services' request. Following meetings, clarifications, and scope reductions, MOX Services invited Kiewit to submit a revised proposal. On August 8, 2006 Kiewit submitted a revised proposal for \$267 million, which was \$85 million higher than MOX Services' estimate for the work.⁴⁷ MOX Services did not award the contract.

MOX Services again tried to stimulate competition to build the concrete structure. It divided the work into three packages and reduced the overall scope of work in an effort to render it more bondable for more firms, and reduce their risk level. The scope reduction included approximately three-quarters of the original structural concrete work, eliminating setting trapped tanks, painting, and the Quality Control inspection requirements (which MOX Services took on as its own responsibility).⁴⁸ MOX Services again advertised the opportunity on the Federal Business Opportunity website and made direct contact with nine firms, sending a new Advance Notice to 45 firms.

MOX Services received two proposals for the first phase of the work. Kiewit bid \$42 million and Baker Concrete Construction, Inc. ("Baker") bid \$37.5 million. Baker won the award for the first phase, and would go on to win all three phases of the structural work on a fixed-price basis.

Baker completed the first phase but experienced challenges during the second. As a result of Baker's technical capability problems, MOX Services began expending more time and resources managing the subcontractor. MOX Services also began taking on the subcontractor's work, including Quality Control. Baker's contract was descoped effective

⁴⁵ *Id.*

⁴⁶ *Id.*

⁴⁷ *See* Kiewit Bid Analysis, Sept. 5, 2006 ("Exhibit 75").

⁴⁸ MOX Services concluded that construction firms willing and able to bid on work of this magnitude would not have the established capability to perform inspections properly. As such, MOX Services took on the QC responsibility.

June 2010.⁴⁹ All unfinished scope on the second and third phases was awarded, on a T&M basis, to Alberici Constructors, Inc.⁵⁰ The transition to the new installation contractor had to be carefully managed to maintain production and quality. MOX Services continued to apply significant Quality Assurance and engineering resources to assist its subcontractors.⁵¹ Other work would also be subcontracted on a T&M basis with increased success.⁵²

b. MOX Services Sought Waiver Of The Contract's Construction Prohibition Clause

Still unable to execute NNSA's failed construction performance strategy without jeopardizing key aspects of the construction effort, MOX Services sought NNSA's permission to waive another aspect of the strategy, namely the Construction Prohibition clause. In its Option 1 Proposal, MOX Services stated that although it "would be preferable to delete [the Construction Prohibition] clause altogether," it proposed to amend the clause to allow it to perform certain construction efforts, as approved by the Contracting Officer.⁵³ DOE denied the request and required MOX Services to proceed based on the unchanged strategy.⁵⁴

In March 2009, MOX Services again requested that NNSA waive the Construction Prohibition clause, explaining that it would self-perform those particular construction efforts "where subcontracting represents an unacceptable risk to safety, quality and cost effectiveness of the project."⁵⁵ MOX Services explained that self-performance had been used successfully on other major projects, citing the Hanford Waste Treatment Plant, the Tritium Extraction Facility at the Savannah River Site, and the National Ignition Facility at

⁴⁹ See MOX Fuel Fabrication Facility, Project Estimate at Completion (EAC) 2010 (Aug. 2010) at Budget Transfers Since 2009 EAC, Construction Section ("Exhibit 76"); Shaw AREVA MOX Services, LLC, Trend Notice 10-0252, CP-20 (Structural) EAC Associated with Contract for Release 2 and 3A Scope (Nov. 30, 2010) ("Trend No. 10-0252") ("Exhibit 77").

⁵⁰ See MOX Fuel Fabrication Facility, Project Estimate at Completion (EAC) 2011 (July 2011) at New 2011 EAC Trends ("Exhibit 78"); Exhibit 77, Trend No. 10-0252.

⁵¹ See MOX Fuel Fabrication Facility, December 2009 Monthly Status Report ("Exhibit 79").

⁵² See, e.g., Letter DCS-DOE-003343, from Paul Simons, Director of Procurement and Property, Shaw AREVA MOX Services, LLC, to Carol Elliot, Contracts Specialist, NNSA (Sept. 15, 2009) (Superior Air Handling T&M contract for HVAC ductwork installation) ("September 15 Letter") ("Exhibit 80").

⁵³ Draft Option 1 Proposal With Comments, at Cost Proposal 6-4 ("Exhibit 81").

⁵⁴ See *id.* at 6-2.

⁵⁵ Letter DCS-DOE-003221, from G.W. Painter, Contracts Manager, Shaw AREVA MOX Services, LLC, to Carol Elliott, NNSA Operations Office (March 12, 2009) ("Exhibit 82").

the Lawrence Livermore National Lab.⁵⁶ MOX Services also proposed to perform a formal make versus buy analysis to ensure that self-performance was in the best interest of the government.⁵⁷

3. Acknowledging The Longstanding Failure Of Its Construction Performance Strategy, NNSA Issued Modification 152

NNSA ultimately acknowledged the failure of its construction performance strategy. Issued on April 12, 2010, Modification 152 removed the Contract's prohibition on self-performing construction work and the associated requirement to subcontract all construction work on a fixed-price basis.⁵⁸ The abandonment of the original construction strategy fundamentally changed MOX Services' construction manager role to that point, allowed MOX Services to self-perform construction activities when in the best interest of the Project, and incorporated MOX Services' suggestion that a make or buy analysis be conducted to ensure that self-performance was in the best interests of the project.⁵⁹

C. MOX Services Is Entitled To An Increase In Target Cost Due To NNSA's Change In Construction Performance Strategy

The failure of NNSA's construction performance strategy changed the contract. Modification 152 recognized this change and abandoned the basis of MOX Services' cost estimate.⁶⁰ The failure of the construction performance strategy was thus a constructive change under the Changes clause. This change requires that the Target Cost be increased to account for related costs. As a result of this adjustment and others, MOX Services' performance has remained within allowable parameters, and entitles it to the unpaid Incentive Fee amounts. Under the Changes clause,⁶¹ a change in the "plans and specifications or instructions incorporated in the contract" requires the Contracting Officer to make an adjustment in the (i) estimated cost, delivery/completion schedule, or both; (ii) the amount of any fixed fee; and (iii) any other affected terms.⁶² The Changes clause is applicable even where a contractor has entered into a bilateral modification.⁶³

⁵⁶ *Id.*

⁵⁷ *Id.*

⁵⁸ Contract DE-AC02-99CH1088, Modification No. 152 (April 12, 2010) ("Exhibit 83").

⁵⁹ *Id.* at 3.

⁶⁰ *See id.* at 1 ("This supplemental agreement is entered into pursuant to authority of: FAR 52.243-2 Changes – Cost-Reimbursement (AUG 1987) and Alternate II (APR 1984), FAR 52.232-22 Limitation of Funds (APR 1984) and mutual agreement between the parties.").

⁶¹ FAR 52.243-2(a) (Alt. III) (Apr 1984).

⁶² FAR 52.243-2(b); *see Space Gateway Support, LLC*, ASBCA No. 55608, 55658, 13-1 BCA ¶35,232 (Jan. 29, 2013) (finding that the specific reference to "fixed fee" did not

1. The Change In The Method Of Performance Entitles MOX Services To An Adjustment to the Target Cost

The Boards of Contract Appeals have held that a change in the method of performance is a fee-bearing change under the Changes clause.⁶⁴ In *ITT Federal Services International Corp.*, the ASBCA explained that even where the deliverable or the nature of the work remained the same, modifications to the method of performing the work are changes within the Changes clause.⁶⁵ Noting that “changes requiring a contractor to use different means or methods of performance than initially contemplated ... routinely fall within the ambit of the Changes clause,” the Board held that such a change entitled the contractor to a fee increase.⁶⁶

In *ITT*, the Army had awarded cost-plus-fixed-fee contracts for operation and maintenance services on Army bases in Germany. The contractor’s fee was negotiated as a percentage of the estimated costs. During performance, contrary to an express condition of ITT’s proposal, over 200 employees were reclassified under the governing Status of Forces agreement from a “non-technical” to a “technical” status. This subjected ITT for the first time to certain German taxes, and made the employees newly ineligible for Army-subsidized benefits.⁶⁷ This reclassification made the contract much more costly and complicated for ITT to perform. Workers became much more difficult and expensive to recruit and retain, and the reclassification greatly increased ITT’s administrative burden.

bar a possible adjustment in the amount of the “award fee” pool as part of an equitable adjustment under the “other affected terms” provision of the Changes clause).

⁶³ See, e.g., *Nat’l Steel and Shipbuilding Co. v. United States*, 49 Fed. Cl. 579, 590 (Fed. Cl. 2001) (allowing recovery under contract’s changes clause where damages outside scope of bilateral modification); *Crane Carrier Corp.*, ASBCA No. 9822, 65-2 BCA ¶ 4945 (agreement only covered costs resulting from modifications expressly referred to). Indeed, the FAR says that unilateral changes are used to “[m]ake changes authorized by clauses other than a changes clause” indicating that the Changes clause governs bilateral modifications. See FAR 4.103(b)(3).

⁶⁴ See, e.g., *C.H. Hyperbarics, Inc.*, ASBCA No. 53077 et al, 04-1 BCA ¶ 32568 (March 23, 2004) (finding that where the Government limits or changes a contractor’s manner of performance under a contract for design and installation, “the action constitutes a compensable change under the contract”).

⁶⁵ ASBCA No. 54001, 06-1 BCA ¶ 33163 (Dec. 29, 2005).

⁶⁶ *Id.* The *ITT Federal Services* decision is notable because the Board borrowed analysis from fixed-price cases and found that a cost reimbursement type contract “does not warrant a different conclusion.” See also *Thomas O’Connor & Co., Inc.*, ASBCA No. 15123, 71-2 BCA ¶ 8926 at 41,500-02 (June 21, 1971) (permitting an increase in the fixed fee on a cost plus fixed fee contract where the change in in the work week caused delay in performance).

⁶⁷ ASBCA No. 54001, 06-1 BCA ¶ 33163 (Dec. 29, 2005).

The Army paid ITT's increased costs, but refused to increase the fee, arguing that the reclassifications involved no new work or extra contract effort.⁶⁸ The Board disagreed, observing that, among other things, ITT was required to implement extensive changes in its personnel practices and to incur unexpected legal, tax and other expenses.

The Board held that the worker reclassification "changed the basis of the bargain," which was premised on workers retaining "non-technical" status. Moreover, ITT had "unambiguously conditioned its cost and fee proposal" on that premise, from which the Army had benefitted.⁶⁹ In awarding ITT increased fee, the Board reasoned that ITT's additional fee entitlement flowed from the contract change and the associated revised risks.⁷⁰

All of the elements that entitled the contractor to additional fee in *ITT* exist here. In both instances, the work product provided to the Government did not change. Just as ITT had, MOX Services based its cost estimates on an express presumption that, through no fault of its own, did not last. As in *ITT*, the fee here was negotiated as a percentage of estimated costs.

Moreover, the impact on MOX Services of the change in construction performance strategy is directly analogous to the impact the employee reclassification had on ITT. The change in *ITT* augmented the contractor's administrative burden greatly. Instead of being able seamlessly to recruit former Army personnel who could continue to rely on Army-subsidized schooling, medical, recreation, and other benefits, ITT had foisted upon it the difficult and complicated task of recruiting and retaining to an overseas location employees who could not rely on an existing, Americanized infrastructure of services. Further, ITT incurred additional expenses in navigating the German accounting, tax, and human resources rules.

Likewise, here the failure of NNSA's construction performance strategy changed MOX Services' role from construction manager to constructor and entailed additional complex administrative, managerial, quality control, and other responsibilities. No longer could MOX services rely on fixed-price subcontractors to perform, supervise, schedule, coordinate, and inspect the work, secure in the knowledge that if the governing NQA-1 standards were not met, the subcontractors would be liable. All of these burdens – plus recruiting, training, accounting, human resources, and myriad other functions – now fell squarely on MOX Services. In these circumstances, as in *ITT*, the changed means of performing the work, not contemplated at the time of contracting, entitles MOX Services to additional fee.

In other circumstances, too, the Boards have recognized that where an abandoned methodology served as the basis for an offeror's price proposal, the change triggers the

⁶⁸ *Id.*

⁶⁹ *Id.*

⁷⁰ *Id.*

offeror's rights under the Changes clause.⁷¹ In *Associated Aero Science Laboratories, Inc.*,⁷² the Board recognized that the contractor negotiated its fee based on work estimates of direct labor cost and numbers of employees at each of two installations, such that the "shifts from on-station to contractor facility work, and the added responsibilities of supervising a different mix of employees did in fact constitute a change."⁷³ As a result, the Board found that the change entitled the contractor to an equitable adjustment in both cost and fee:

Since the fixed fee was negotiated based upon a pattern of work which was included in the contract by way of estimates of direct labor cost and numbers of employees at each installation, it is our opinion that the drastic shifts from on-station to contractor facility work, and the added responsibilities of supervising a different mix of employees did in fact constitute a change. For this change, appellant is entitled to an equitable adjustment in the fixed-fee.⁷⁴

Here, NNSA directed the construction performance strategy, requiring MOX Services to perform as the Project's Construction Manager and prohibiting MOX Services from self-performing construction. When its strategy failed, NNSA issued Modification 152 to remove the original prohibitions on the method of performance which had proven unworkable.

In *Associated*, the change that reduced on-station work and increased work at Associated's facilities required that the contractor recruit, train, and supervise a different class of employee, at a different location, than the parties had bargained for. Here, then, as in *Associated*, MOX Services' new role required it to take on many administrative, managerial and support functions that the parties had expected would be performed by fixed-price subcontractors. And, as in *Associated*, MOX Services' change from construction manager to constructor constitutes change in the method of performance for which the government is responsible. As a result, MOX Services is entitled to adjustment of the Target Cost.

Relatedly, Boards have also recognized that the Government assumes responsibility for the specifications it supplies for preparing estimates and performing the work.⁷⁵ As a result, when defective specifications are encountered, the contractor is entitled to recover the

⁷¹ See, e.g., *Environmental Safety Consultants, Inc.*, ASBCA No. 53485, 05-1 BCA ¶ 32903 (March 8, 2005) (granting offeror "costs incurred in performing the work using a method different than what appellant planned in bidding" on the fixed-price contract to remove, transport, and dispose of industrial waste sludge from two lagoons at a Naval facility).

⁷² ASBCA Nos. 15451, 15634, 72-1 BCA ¶ 9293 at 43,059 (Jan. 25, 1972).

⁷³ *Id.*

⁷⁴ *Id.*

⁷⁵ *Consolidated Diesel Elec. Corp.*, ASBCA No. 10486, 67-2 BCA ¶ 6669 (Oct. 17, 1967).

increased expenditures caused by the defect.⁷⁶ NNSA's construction performance strategy is much like a defective specification. NNSA owned and directed the performance strategy. NNSA's strategy failed, and, like a defective specification, had to be changed, entitling MOX Services to an adjustment to the costs used to determine entitlement to Incentive Fees.

2. MOX Services Is Entitled To An Increase In The Target Cost To Account For Risks Excluded From Its Cost Estimate

MOX Services' cost estimate assumed "an adequate number of suppliers, vendors and subcontractors with NQA-1 programs that have capacity and technical capabilities to support project schedule."⁷⁷ It further assumed "that the subcontractors and their suppliers will have a compliant QA program which can be verified through audit prior to their initiation of work on the MFFF."⁷⁸ Thus, MOX Services excluded from its cost estimate the risk of not having enough qualified subcontractors to provide competition.

The Boards have recognized that a close relationship between contract scope and estimated cost "is both a legal and a practical requirement."⁷⁹ Where the cost of certain work is omitted from a contractor's estimate, that work is outside the scope of the contract.⁸⁰ When the work not contemplated by the parties materializes, the increased costs must be considered in the contractor's entitlement to fee.⁸¹

Here, excluding the risk that the marketplace could not provide sufficient qualified, capable subcontractors to generate competition involved a clear trade-off between the parties. The Target Cost was based on assumptions imbedded in cost estimates that proved unfounded. When these assumptions failed to materialize, NNSA became liable not only for

⁷⁶ See, e.g., *Big Chief Drilling Co. v. United States*, 26 Cl. Ct. 1276 (1992) (defective specification case resulting in award of lost profits on the amounts which the contractor was forced to expend to correct the problem); *Wu & Associates, Inc.*, LBCA No. 2003-BCA-1, 07-2 B.C.A. ¶ 33595 (Jan. 5, 2007) (defective specification case involving lost profit award); *J.W. Bateson Co., Inc.*, VABCA No. 1148, 79-1 BCA ¶ 13573 (Dec. 14, 1978) (defective specification case involving award of costs and fee, remanding to the parties to negotiate the amount of fee).

⁷⁷ Exhibit 20, BCP #05-011, MA 15 Basis of Estimate.

⁷⁸ *Id.* MOX Services also noted that it was uncertain how much effort would be needed to elevate some subcontractors' QA programs to the NQA-1 standard. *Id.*

⁷⁹ *H.K. Ferguson Co.*, ASBCA 2826, 57-1 BCA ¶ 1293 (March 29, 1957). *Ferguson* is discussed in greater detail in Section VI of this Claim, which addresses MOX Services' entitlement to fee to increased costs related to the purchase and installation of process units.

⁸⁰ *Id.* ("To say that the scope of the contract includes a substantial amount of work that was not taken into account in determining the estimated cost is to say that the contract was entered into in violation of law.").

⁸¹ *Id.*

the additional costs, but for the increased costs' impact on MOX Services' entitlement to Incentive Fee as well. In these circumstances, under the Changes clause, NNSA must adjust the Target Cost in a manner commensurate with the resulting additional costs.

D. Impact

MOX Services incurred increased costs as a result of the change to the construction performance strategy. MOX Services experienced such cost growth in connection with increased construction management scope (\$153,070,766) and increased QA/QC resources to provide Quality Assurance support to vendors (\$105,544,098).⁸² The sections that follow detail the impact of this cost growth.⁸³

1. Impact: Construction Management Cost Growth

To accomplish the concrete structure work within its circumscribed role of construction manager, MOX Services had to break up the planned complex construction packages into numerous discrete work elements. MOX Services augmented and reorganized its workforce to undertake increased construction management responsibilities not contemplated by its Option 1 proposal. In this section, MOX Services quantifies its construction management cost growth, as measured by the difference between the 2007 Baseline and 2012 Rebaseline with Addendum estimates. The following chart summarizes this cost growth:

⁸² As described in the Process Equipment Changes and Incentive Fee Payments sections of this Claim, MOX Services' schedule analysis has determined that the process units controlled the critical path until funding reductions and uncertainties following the 2012 Rebaseline defeated MOX Services' ability to complete a Project schedule to completion. If refinements to the schedule analysis subsequently reveal that the construction of the MFFF plant at times controlled the critical path, however, MOX Services believes that delays occasioned by NNSA's failed strategy will provide the necessary schedule extension to bring MOX Services within the schedule parameters that entitle it to incentive fee. MOX Services reserves the right to develop this alternative argument.

⁸³ MOX Services also experienced cost growth due to a lack of competition among construction subcontractors and inefficiencies caused by lack of qualified vendors. These savings from competition contemplated in the original estimate would account for some of the difference between the 2007 Baseline and the 2012 Rebaseline. Although MOX Services has not attempted to separately determine these costs as part of this claim, it acknowledges this potential alternative basis for augmenting the Target Cost.

Chart IV.2 Construction Management Cost Growth⁸⁴

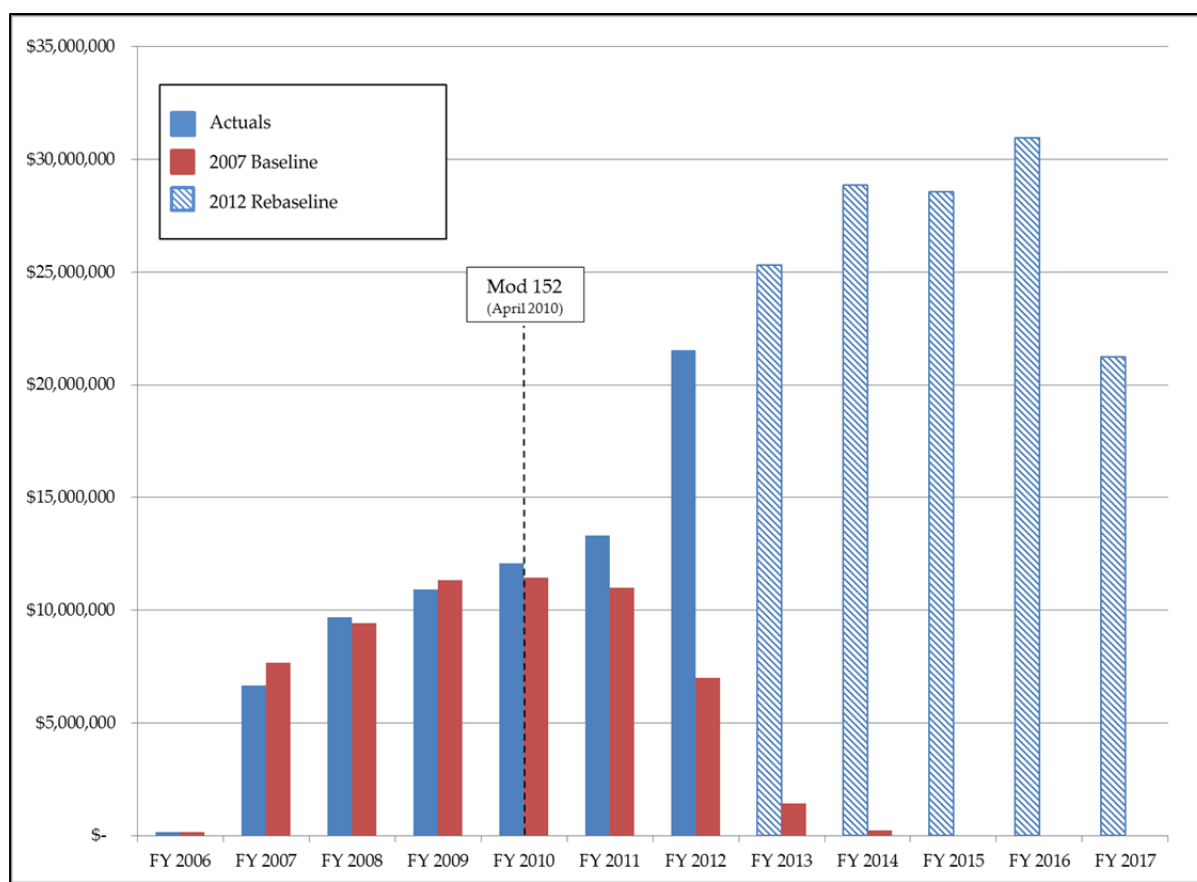
		[A]	[B]	[C] = B - A
		2012 Rebaseline with		
Cost Account	Cost Account Description	2007 Baseline	Addendum	Cost Growth
1504.8541	Supervision / Admin	\$ 21,437,033	\$ 107,636,857	\$ 86,199,824
1500.8501	Management / Admin	23,522,195	63,202,558	39,680,363
1500.8502	Project Controls	10,943,800	32,745,008	21,801,208
All Other		5,611,467	11,000,838	5,389,371
Total Construction Management		\$ 61,514,495	\$ 214,585,261	\$ 153,070,766

As of the 2012 Rebaseline with Addendum estimate, MOX Services estimated that it would incur \$153,070,766 in cost growth for Construction Management to address the need for more construction management staff to manage the greater quantity of small work packages to complete the construction effort. Additionally, due to the overall delays in the completion of the Option 1 effort, MOX Services' construction management staff would be required for a longer duration on the Project.⁸⁵

The following chart compares MOX Services' estimated construction management labor costs from the 2007 Baseline against actual such costs and its 2012 Rebaseline estimates of these costs in future years.

⁸⁴ See Schedule 4.2.

⁸⁵ In its september 2008 Monthly Variance Report, MOX Services documented the fact that its own expected staffing levels would increase in order to oversee the execution of Time & Materials subcontracts. See Sept. 2008 Monthly Variance Report (Corrective Action under 15.00 and 15.05) ("Exhibit 84").

Chart IV.3, Construction Management Labor Cost Comparison FY06 – FY17⁸⁶

The red bars represent MOX Services' estimated construction management labor costs in the 2007 Baseline. The blue bars represent MOX Services' actual labor costs through 2012. The blue textured bar represents MOX Services' construction management cost estimate for FY13 – FY 17 as reflected in the 2012 Rebaseline.

Construction Management is generally considered to be a Hotel Load activity and is estimated as such. Under the 2007 Baseline estimate (red bars), the great majority of the construction effort was expected to be incurred between FY08 - FY11, to include scheduled completion of the concrete structure in FY11. The 2007 Baseline estimate anticipated fairly consistent effort in FY08 – FY11, followed by steep reductions in FY12 and FY13 as the Project neared completion.

The foregoing chart also demonstrates that between FY07 and FY10, MOX Services' actual costs (blue bars) were generally consistent with the 2007 Baseline estimate (red bars). After Modification 152, it became increasingly difficult to implement and manage the NNSA-directed construction performance strategy. MOX Services' actual costs began to outpace its estimated costs in FY10, and this difference became more pronounced in FY11

⁸⁶ See Schedule 4.21.

and FY12. Further, the chart shows that the 2012 Rebaseline estimates that the majority of the increased cost will be incurred in FY13-FY17. These higher costs, which average about \$27 million/year in FY13-FY17, reflect the increased construction management complexity and effort MOX Services will incur in managing craft installers (pipefitters, electricians, HVAC mechanics, etc.) now that the structure is complete.

2. **Impact: Quality Assurance / Quality Control Cost Growth Associated With Additional Construction Efforts**

MOX Services also experienced a significant change in scope in QA/QC, a critical support function for the Project. The change in MOX Services' QA scope of work and the corresponding cost growth of nearly \$146 million was driven largely by the lack of qualified subcontractors available to perform the work and who could meet the required NQA-1 nuclear industry standards.⁸⁷ It became necessary for MOX Services to embed dedicated MOX Services quality assurance and engineering personnel with suppliers and subcontractors to train personnel and ensure materials and installation met NQA-1 requirements. The total QA cost growth is illustrated below.

Chart IV.4, Total Cost Growth in Management Area 19 – Quality Assurance/Quality Control⁸⁸

	<u>Amount</u>
2007 Baseline	\$ 23,023,054
2012 Rebaseline with Addendum	168,879,568
Cost Growth	<u>\$ 145,856,514</u>

Of this \$145,856,514 amount, about \$106 million stems from QA effort related to constructing the facility, and purchasing and installing commodities, and is discussed here. The remaining amounts (\$26 million related to process units, and \$15 million related strictly to Hotel Load QA costs) are summarized in the chart below, but are discussed in full in other Claim Sections.

⁸⁷ Root Cause Analysis of Cost Increases 2-20 (2014) (stating that “[t]he atrophy of the US nuclear industry affected the availability of qualified and experienced staff, as well as the nuclear and NQA-1 supply chain.”) Exhibit 35; U.S. Gov’t Accountability Office, Rep. No. GAO-14-231, Plutonium Disposition Program: DOE Needs to Analyze the Root Causes of Cost Increases and Develop Better Cost Estimates 20 (2014) Exhibit 71.

⁸⁸ See Schedule 4.11.

Chart IV.5, Cost Growth Related to Quality Assurance⁸⁹

	<u>Amount</u>	<u>% of Total</u>
QA Related to Process Units	\$ 25,654,194	18%
QA Related to Construction Effort	105,544,098	72%
QA Related to Hotel Load	14,658,222	10%
Total	\$ 145,856,514	100%

The Option 1 Statement of Work required MOX Services to provide construction management services, including “oversight, monitoring and inspection of the vendors to ensure quality assurance requirements are met.”⁹⁰ Accordingly, MOX Services’ QA budget and staffing plan in the 2007 Baseline assumed that MOX Services’ QA role would be one of oversight only and that experienced and qualified subcontractors capable of performing work under NQA-1 standards would be available.⁹¹ The MOX Services QA group was responsible for maintaining the MOX Project Quality Assurance Plan, which met the NRC’s federal regulatory requirements.⁹² The standards contained in the MOX QA plan were to be flowed down to the subcontractors and vendors, who were to develop and implement their own QA programs under the watch of the MOX Services QA organization.⁹³

It became clear during the subcontracting process, however, that capable subcontractors were not available in sufficient numbers to provide the required products and services. Very few companies were capable or willing to accept the QA requirements specified by MOX Services in its bid packages. As a result, MOX Services undertook a program mitigation initiative of building and staffing its own QA organization with the appropriate resources to perform the QA functions required to meet NRC standards. This additional scope led to significant cost growth within QA functions. The significant variance

⁸⁹ Construction Strategy Change Schedule 4.1 and source schedules cited therein show the detailed allocation for QA cost accounts. Footnote 109 of the PUDC Changes section of this Claim (Section IV) describes the allocation methodology used by MOX Services.

⁹⁰ Letter DCS-DOE-003712 from Robert Walter, Senior Contracts Administrator, Shaw AREVA MOX Services, LLC, to Robert Swett, NNSA (Feb. 18, 2011) (REA 10-022 QA/QC and NQA-1 Vendor Support at 1) (“Exhibit 85”).

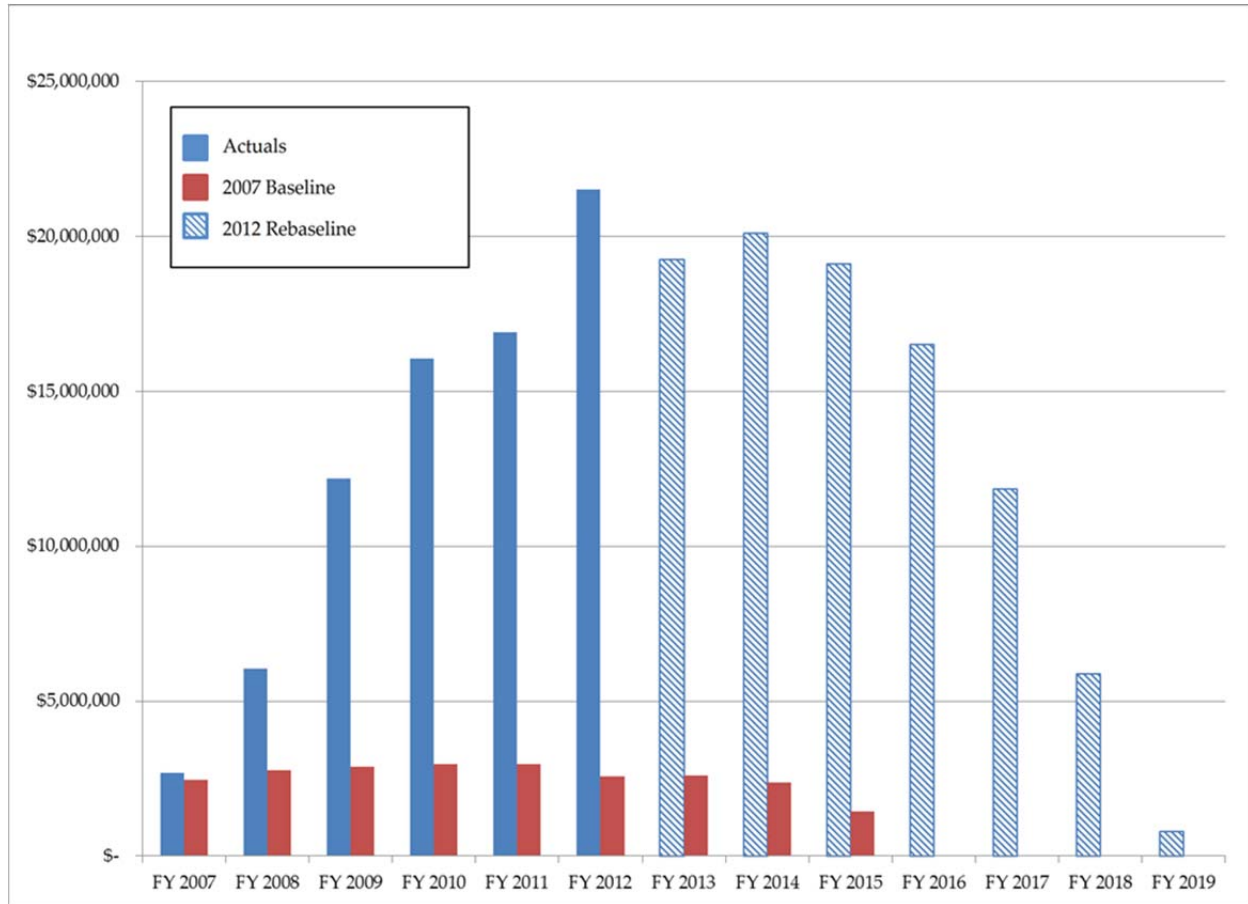
⁹¹ MOX Fuel Fabrication Facility, PCN 10-0346, 2010 EAC: MA 19 Quality Assurance/Quality Control (Nov. 29, 2010) at 1 (“Exhibit 86”).

⁹² Exhibit 30, Option 1 Proposal, Volume 1 (Technical Proposal) at 2-80 (addressing at ¶ 2.5.3 Quality Assurance (QA)).

⁹³ Id.

between the 2007 Baseline QA estimate and the actual QA work performed and estimated to be performed in the 2012 Rebaseline with Addendum is illustrated in the following chart.

Chart IV.6, Quality Assurance Cost Comparison FY07 – FY19⁹⁴



In its 2007 Baseline (red bars), MOX Services estimated that it would incur approximately \$23 million in QA-related costs through FY16. This cost and staffing plan generally reflects a consistent level of effort support and limited oversight throughout the contract performance period. Through FY12, MOX Services had already incurred approximately \$75 million in QA costs (blue bars), over three times the original budget that assumed MOX Services would be performing QA functions in an oversight role. MOX Services expected QA costs to be significantly higher in FY13 than originally planned (blue textured bar) due to the continued impact of NNSA's scope change.

⁹⁴ See Schedule 4.13.

CB&I AREVA MOX Services, LLC.
Construction Strategy Change Claim Summary

Schedule 4.0

	[A]	[B]	[C] = B - A	[D] = C
	<u>2007 Baseline</u>	<u>2012 Rebaseline with Addendum</u>	<u>Cost Growth</u>	<u>Claim Growth</u>
Construction Claim Costs	\$ 78,174,343	\$ 336,789,207	\$ 258,614,864	\$ 258,614,864

Sources:

Schedule 4.01

CB&I AREVA MOX Services, LLC.
Construction Strategy Change Claim - Cost Growth

Schedule 4.01

	[A]	[B]	[C] = B - A	[D] = C
Category Description	2007 Baseline	2012 Rebaseline with Addendum	Cost Growth	Claim Growth
Quality Assurance	\$ 16,659,849	\$ 122,203,946	\$ 105,544,098	\$ 105,544,098 ⁽¹⁾
Construction Management	61,514,495	214,585,261	153,070,766	153,070,766
Construction Strategy Change Total	\$ 78,174,343	\$ 336,789,207	\$ 258,614,864	\$ 258,614,864

Sources:

[A] Schedules 4.11 and 4.2

[B] Schedules 4.11 and 4.2

[C] Calculated

[D] Calculated

Notes:

(1) In total, Quality Assurance cost growth is \$145,856,514. Our analysis estimates that \$105,544,098 of this cost growth relates to Construction. (See Schedule 4.1 series)

CB&I AREVA MOX Services, LLC.
Quality Assurance (QA) Claim Cost Summary

Schedule 4.1

	Cost Amount
Overall QA Scope Change	\$ 145,856,514
QA Related to Process Units	\$ 25,654,194
QA Related to Construction Effort	105,544,098
QA Related to Hotel Load	14,658,222
Total	\$ 145,856,514

Sources:

Schedule 4.11

CB&I AREVA MOX Services, LLC.
QA Scope Change By Category Through 2012 Rebaseline with Addendum

Schedule 4.11

	[A]	[B]	[C]	[D]	[E] = A*B	[F] = A*C	[G] = A*D	[H] = E + F + G
	Cost Amount	% Process Unit Related	% Construction Effort Related	% Hotel Load	Amount Related to Process Units	Amount Related to Construction Effort	Amount Related to Hotel Load	Total
2007 Baseline	\$ 23,023,054	17.59%	72.36%	10.05%	\$ 4,049,445	\$ 16,659,849	\$ 2,313,760	\$ 23,023,054
2012 Rebaseline with Addendum	168,879,568	17.59%	72.36%	10.05%	29,703,639	122,203,946	16,971,983	168,879,568
Cost Growth	\$ 145,856,514				\$ 25,654,194	\$ 105,544,098	\$ 14,658,222	\$ 145,856,514

Sources:

[A] - [D] Schedule 4.12

[E] - [H] Calculated

CB&I AREVA MOX Services, LLC.
Categorization of Quality Assurance Cost Growth By Cost Account⁽¹⁾

		[A]	[B]	[C] = B - A	[D]	[E]	[F]	[G] = C*D	[H] = C*E	[I] = C*F	[J] = G + H + I
		2012						Cost Growth Allocation			
Cost Account	Cost Account Description	2007 Baseline	Rebaseline with Addendum	Cost Growth	% Process Unit Related	% Construction Effort Related	% Hotel Load	Process Unit Related	Construction Effort Related	Hotel Load	Total
1901.6020	QA Program Management & Administration	\$ 3,211,818	\$ 12,989,851	\$ 9,778,033	0%	0%	100%	\$ -	\$ -	\$ 9,778,033	\$ 9,778,033
1901.6021	Quality Engineering	4,758,444	24,010,181	19,251,737	33%	67%	0%	6,353,073	12,898,664	-	19,251,737
1901.6022	Audit & Surveillance	1,318,214	13,036,397	11,718,183	25%	75%	0%	2,929,546	8,788,637	-	11,718,183
1901.6023	Quality Control Projects	4,652,064	78,946,499	74,294,435	18%	83%	0%	13,001,526	61,292,909	-	74,294,435
1901.6024	QA & QC Assembly GS	1,716,727	4,392,446	2,675,719	85%	15%	0%	2,274,361	401,358	-	2,675,719
1901.6026	QA/QC Subcontractors	300,000	256,791	(43,209)	0%	100%	0%	-	(43,209)	-	(43,209)
1901.6027	Testing & Inspection QA/QC	3,776,738	22,121,449	18,344,711	0%	100%	0%	-	18,344,711	-	18,344,711
1902.6020	QA Program Management & Administration	-	1,809,790	1,809,790	0%	0%	100%	-	-	1,809,790	1,809,790
1902.6021	Quality Engineering	-	1,277,372	1,277,372	33%	67%	0%	421,533	855,839	-	1,277,372
1902.6022	Audit & Surveillance	-	1,270,862	1,270,862	25%	75%	0%	317,716	953,147	-	1,270,862
1902.6023	Quality Control Projects	-	2,036,800	2,036,800	18%	83%	0%	356,440	1,680,360	-	2,036,800
1902.6026	QA/QC Subcontractors	-	22,215	22,215	0%	100%	0%	-	22,215	-	22,215
1902.6027	Testing & Inspection QA/QC	-	349,467	349,467	0%	100%	0%	-	349,467	-	349,467
Subtotal QA Cost Accounts Identified in REAs⁽²⁾		\$ 19,734,005	\$ 162,520,120	\$ 142,786,115				\$ 25,654,194	\$ 105,544,098	\$ 11,587,823	\$ 142,786,115
1901.6017	Human Performance Improvement Program	\$ -	\$ 162,906	\$ 162,906	0%	0%	100%	\$ -	\$ -	\$ 162,906	\$ 162,906
1901.6018	QA/QC - JLE/LTTA	-	-	-	0%	0%	100%	-	-	-	-
1901.6025	MOX Potential Back Charges	-	399	399	0%	0%	100%	-	-	399	399
1901.6028	Commercial Grade Dedication	-	54,273	54,273	0%	0%	100%	-	-	54,273	54,273
1901.6029	Regulatory Compliance	720,511	5,147,845	4,427,334	0%	0%	100%	-	-	4,427,334	4,427,334
1901.9003	Quality Engineering	1,353,049	-	(1,353,049)	0%	0%	100%	-	-	(1,353,049)	(1,353,049)
1901.9503	Quality Engineering	-	-	-	0%	0%	100%	-	-	-	-
1902.6017	Human Performance Improvement Program	-	10,204	10,204	0%	0%	100%	-	-	10,204	10,204
1902.6029	Regulatory Compliance	-	983,821	983,821	0%	0%	100%	-	-	983,821	983,821
1902.9503	Quality Engineering	1,215,489	-	(1,215,489)	0%	0%	100%	-	-	(1,215,489)	(1,215,489)
Other QA Cost Accounts		\$ 3,289,049	\$ 6,359,448	\$ 3,070,399				\$ -	\$ -	\$ 3,070,399	\$ 3,070,399
Total		\$ 23,023,054	\$ 168,879,568	\$ 145,856,514				\$ 25,654,194	\$ 105,544,098	\$ 14,658,222	\$ 145,856,514
					% of Total			17.59%	72.36%	10.05%	100.00%

Sources:

[A] May 2007 PRISM data adjusted for budget transfers occurring July 2007 through September 2012

[B] 2012 contract proposal value as stated in December 2012 PRISM data and adjusted for 2012 Rebaseline Addendums

[C] Calculated

[D], [E], [F] Cost accounts 6020, 6021, 6022, 6023, 6024, 6026 and 6027 percentage allocations provided by MOX Services QA personnel. All other cost accounts in this analysis are categorized as Hotel Load.

[G] Calculated

[H] Calculated

[I] Calculated

[J] Calculated

Notes:

1) The categorization of QA cost growth to process units, construction effort and hotel load is based on applying percentage allocations developed by MOX Services QA personnel for each of the QA cost accounts. Although all of the QA accounts are classified as time related or hotel load within MOX Service's PRISM system, for purposes of quantification of impacts from NNSA changes, the Quality Assurance changes have been separated.

2) These QA cost accounts were identified as having cost growth related to changed scope within REAs 10-002, 11-003, and 11-005.

CB&I AREVA MOX Services, LLC.
Quality Assurance 2007 Baseline v. 2012 Rebaseline
FY 2006 - FY 2019

	[A]	[B]	[C] = B - A
Fiscal Year	2007 Baseline	2012 Rebaseline	Cost Growth
FY2006	\$ 12,639	\$ 13,461	\$ 822
FY2007	2,461,071	2,684,889	223,817
FY2008	2,760,172	6,034,676	3,274,504
FY2009	2,885,639	12,185,513	9,299,874
FY2010	2,966,022	16,051,904	13,085,881
FY2011	2,953,683	16,901,485	13,947,802
FY2012	2,567,914	21,504,311	18,936,398
FY2013	2,585,887	19,266,075	16,680,189
FY2014	2,372,615	20,091,135	17,718,520
FY2015	1,439,482	19,120,321	17,680,839
FY2016	17,930	16,519,614	16,501,684
FY2017	-	11,850,508	11,850,508
FY2018	-	5,877,243	5,877,243
FY2019	-	778,433	778,433
Total	\$ 23,023,054	\$ 168,879,568	\$ 145,856,514

Notes:

Quality Assurance cost and budget were moved to MA 19 (Quality Assurance) in FY2009 primarily from MA 06 (Project Management). This analysis time phases the QA from the 2007 Baseline (adjusted for budget transfers between July 2007 and September 2012) and 2012 Rebaseline based on original QA accounts included in the original May 2007 Baseline and 2012 Rebaseline.

CB&I AREVA MOX Services, LLC.
Construction Management Cost Growth by Cost Account

Schedule 4.2

		[A]	[B]	[C] = B - A
Cost Account	Cost Account Description	2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1504.8541	Supervision / Admin	\$ 21,437,033	\$ 107,636,857	\$ 86,199,824
1500.8501	Management / Admin	23,522,195	63,202,558	39,680,363
1500.8502	Project Controls	10,943,800	32,745,008	21,801,208
1505.8551	Supervision / Admin	(41,922)	3,461,412	3,503,334
1500.8506	Business	1,451,888	4,061,850	2,609,963
1501.8512	Temporary Assignments	20,153	1,802,546	1,782,393
1504.8512	Temporary Assignments	-	1,858	1,858
1501.8519	Project Controls	-	-	-
1502.8521	Supervision / Admin	-	-	-
1502.8522	Project Controls	-	-	-
1502.8523	Quality Assurance	-	-	-
1502.8524	ES&H	-	-	-
1503.8531	Supervision / Admin	-	-	-
1503.8532	Project Controls	-	-	-
1503.8534	ES&H	-	-	-
1504.8542	Work Control Group	-	-	-
1505.8552	Project Controls	-	-	-
1505.8554	ES&H	-	-	-
1501.8511	Business Travel	711,965	494,312	(217,653)
1500.8503	Quality Assurance	749,625	484,283	(265,342)
1500.8504	ES&H	2,719,758	694,576	(2,025,182)
Total Construction Management		\$ 61,514,495	\$ 214,585,261	\$ 153,070,766

Sources:

[A] and [B] Schedule 1.3

[C] Calculated

CB&I AREVA MOX Services, LLC.
Construction Management Labor Cost Growth by Fiscal Year⁽³⁾
FY 2006 - FY 2017

	[A]	[B]	[C] = B-A
Fiscal Year	2007 Baseline as Provided ⁽¹⁾	2012 Rebaseline with Addendum ⁽²⁾	Labor Growth
FY 2006	\$ 158,897	\$ 158,897	\$ -
FY 2007	7,655,631	6,663,114	(992,517)
FY 2008	9,433,823	9,670,870	237,047
FY 2009	11,350,375	10,921,746	(428,629)
FY 2010	11,440,132	12,075,918	635,785
FY 2011	11,005,133	13,299,039	2,293,906
FY 2012	6,985,889	21,523,947	14,538,058
FY 2013	1,436,871	25,325,028	23,888,156
FY 2014	216,065	28,873,600	28,657,535
FY 2015	-	28,551,082	28,551,082
FY 2016	-	30,957,657	30,957,657
FY 2017	-	21,225,716	21,225,716
Total	\$ 59,682,817	\$ 209,246,613	\$ 149,563,796

Sources:

[A] May 2007 PRISM Data - Labor Costs

[B] 2012 contract proposal value as stated in December 2012 PRISM data and adjusted for 2012 Rebaseline Addendums - Labor Costs

[C] Calculated

Notes:

(1) This does not include adjustments for budget transfers between July 2007 and September 2012 or the 2012 Rebaseline Addendum costs.

(2) 2012 Rebaseline reflects actuals incurred through the end of FY 2012. FY 2013 and later represents the estimated costs included in the 2012 Rebaseline.

(3) Construction Management Labor Cost identified by cost elements Accrued Labor (AL), Labor (L), Accrued Craft Labor (AY), and Craft Labor (Y).

V. THE DESIGN IMMATURITY OF THE PROJECT AT THE TIME OF ESTIMATING APPLIES TO THE ENTIRE CLAIMED \$2.5 BILLION ADJUSTMENT TO THE TARGET COST

The foregoing “Process Unit” and “Change in Method of Performance” sections set forth NNSA’s responsibility for the increased MFFF costs as they relate to the 2007 Baseline’s under-informed estimates regarding how much the building and its equipment would cost. At root, the combined \$1.5B in increased costs discussed in these sections was due to government-caused information deficits supporting the 2007 Baseline estimates that necessitated an overreliance on untested assumptions. As for the equipment, without pilot procurements, the process unit estimates assumed the accuracy of untested bottom-up extrapolations of labor and materials costs. And as for building the facility, the construction strategy assumed that multiple capable contractors would bid on large construction packages on a fixed-price basis, and that such competition would drive down costs and minimize the chance of cost increases.

The MFFF project’s third major cost area involves the systems necessary to meld the other two. In addition to the costs of the facility and of the equipment the structure would house, the project required significant investment to prepare the facility to provide utilities to the equipment and to install the process units. Among other things, these costs included the purchase of commodities, such as electrical cable, HVAC duct, piping for various gases and liquids, and the engineering and craft labor necessary to design and carry out the process unit installation. As with the estimates for the facility and process unit costs, NNSA caused 2007 Baseline estimates for these systems-related costs to be based on deficient information.

Specifically, 2007 Baseline cost and schedule estimates were based on immature system designs. And, indeed, the data deficits explained here had elements emanating from external political developments (like, especially, the process unit estimating situation) and failed assumptions of the feasibility of fixed-priced subcontracting (like, especially, the change in method of construction performance).

Not only were the three main areas of increased costs interconnected. The causal factors for them also overlapped. Thus, the rubric of this “design immaturity” section also could apply to the process unit estimates (which proved much more difficult to design and build under NQA-1 strictures than bargained for in 2007), with political developments a major contributing factor. And, just as the “estimate first, design later” problem described in this section entailed the rushed, unfounded assumption that the systems design, fabrication and installation could be accomplished with fixed-price subcontracts, the acquisition strategy assumed, with no tangible support or precedent, that the facility could be built efficiently by having firms compete for the award of large, risky fixed-priced contracts.

In short, the concept described here on which MOX Services claims entitlement to a \$1,199 million increase in the incentive fee cost parameter for systems-related costs applies as well to the entire \$2.5 billion adjustment to the Target Cost claimed here. And the theory encompasses schedule extensions related to design immaturity as well.

The nearly \$1,200 million in construction related cost growth over the 2007 Baseline estimates includes \$357 million in additional bulk commodity, mechanical equipment, and materials purchasing costs; \$785 million in associated increased installation costs¹; and \$58 million in associated increased Title III Engineering costs. The following table presents these amounts at the level of Management Area 17 for selected Construction cost accounts,² and for Management Area 10 for discrete Title III construction engineering.

Chart V.1, Summary of MFFF Systems Construction Cost Growth^{3, 4}

	[A]	[B]	[C] = B - A	[D]
Category Description	2007 Baseline	with Addendum	Cost Growth	Claim Amount
Installation	\$ 817,738,444	\$ 1,602,357,424	\$ 784,618,980	\$ 783,349,620
Materials	244,861,751	601,793,073	356,931,323	356,920,702
Title III Engineering	32,948,661	91,265,151	58,316,491	58,296,541
Total	\$ 1,095,548,855	\$ 2,295,415,649	\$ 1,199,866,793	\$ 1,198,566,862

A. MOX Services Is Entitled To An Increase Of the Target Cost Due To Increased Systems Costs

MOX Services is entitled to an adjustment of the Target Cost of the entire \$1,198,566,862 of estimated claimed cost growth under the seminal case of *H.K. Ferguson Company*, ASBCA No. 2826, Mar. 29, 1957, 57-1 BCA ¶1293. *Ferguson* stands for the proposition that when the scope of work on a cost-type contract is stated in very general terms, it is appropriate to look to the contract's negotiated estimated cost to determine what work was contemplated by the parties. The *Ferguson* methodology is especially apt where, as here, extensive design evolution after the estimated costs are set causes the work the

¹ As used here, "installation costs" refers to cost elements such as craft labor, supervision labor, equipment costs and miscellaneous materials not captured in "materials" cost accounts.

² Construction cost growth captured here does not include cost growth in MA 17 related to process units, which is claimed separately in Section III, nor does it include increased construction management and quality assurance costs due to the change in performance strategy (Claim Section IV), nor additional engineering costs under the Base Contract..

³ Column A is taken from May 2007 PRISM data, adjusted for budget transfers between July 2007 and September 2012. Column B is taken from December 2012 PRISM data.

⁴ See Schedule 5.01. Detailed schedules of the amounts established in this section of the Claim are found appended to this Section V as "MFFF Construction Schedules."

contractor actually performs to materially exceed the amount and character of the work contemplated by the contract.⁵ *Id.* at 22.

The *Ferguson* Board observed that for budgetary and Antideficiency Act purposes “[t]here is a close relation between the work required by the contract and the estimated cost.” *Id.* at 21. This is so because to “say that the scope of the contract includes a substantial amount of work that was not taken into account in determining the estimated cost is to say that the contract was entered into in violation of law.” *Id.* Given the “legal and practical requirement” of a nexus between the work contemplated and the estimated costs (*id.* at 22), the Board held that the contractor was entitled to additional fee under the changes clause because the evolving designs constituted changes in functional requirements, or “scope” in changes clause parlance. *Id.* at 21.

Applying *Ferguson*’s time-tested construct here,⁶ it is far from enough to say that the changes clause is not implicated because the original purpose of the MFFF has not changed. Although the purpose of the Project has always been to transform weapons-grade Plutonium into mixed oxide fuel to be irradiated in nuclear reactors, for Option 1 DOE directed MOX Services to estimate first and design later. The result has been, among other things, substantial increases in MFFF systems construction costs over the estimates supporting the 2007 Baseline.

B. The MFFF Situation Is Nearly Identical To That Explored in *H.K. Ferguson Company*

Ferguson addressed a request for equitable adjustment in a situation that is astonishingly similar to the one presented here.⁷ *Ferguson* concerned the contractor’s entitlement to fee on a design-build contract for a first-of-a-kind facility involving extremely

⁵ It is appropriate to look to the 2007 Baseline’s estimated negotiated cost for Project construction (MA 17), \$1.06 billion, to determine the work the parties contemplated as within Option 1. The difference between the 2007 Baseline and the 2012 Rebaseline with Addendum estimates accurately reflects the difference between the parties’ contemplation of the work included in Option 1 and the amount and character of the work MOX Services actually performed. *See Ferguson*, 57-1 BCA ¶1293 at 22.

⁶ Although issued over 50 years ago, *Ferguson* has never been overruled, and the case is favorably discussed in its own subsection of Prof. Ralph Nash’s authoritative *Government Contract Changes* treatise. *See* Ralph C. Nash & Steven W. Feldman, *Government Contract Changes* §8.4 (“Cost-Reimbursement Contracts: Defining a ‘Change’”) (Thompson Reuters June 2014).

⁷ The similarities extend all the way to underestimated costs of constructing gloveboxes, or, in *Ferguson*’s terms, “reyneir chambers,” to the government’s changing specifications. *Ferguson*, 57-1 BCA ¶1293 at 10-11. The project in *Ferguson* required the construction of 300 of these “highly complex” reyneir chambers, each taking at least five months to make, through which scientists could perform bacterial warfare experiments.

dangerous materials that required many complex safety systems, and where the designs were evolving concurrently with construction. On behalf of the Chemical Corps, the Corps of Engineers procured the cost-plus-fixed-fee contract under which Ferguson would design and engineer, and serve as the construction manager for a facility in which bacterial agents for military use would be developed and manufactured. *Id.* at 1. In addition to designing and building the facility, the contractor was responsible for procuring and installing the process equipment that was being designed by the Chemical Corps. *Id.* at 3-4.

At the time of contracting the Chemical Corps either had not completed the process equipment designs or the designs were classified. In either case, the designs were unknown to the Corps of Engineers and Ferguson during contract negotiations.⁸ *Id.* at 5. The Chemical Corps' urgent need for the facility required that construction proceed concurrently with design. *Id.* at 6. It was only during contract performance that the facility's true complexity came to light. *Id.* at 4. Ferguson's fee was negotiated based on the estimated costs and schedule of the facility (*id.* at 5), and the dispute over Ferguson's fee arose when it became apparent that the facility would cost twice as much, and take three times as long, as the parties initially anticipated. *Id.* at 1.

In these circumstances, the *Ferguson* panel rejected the government's contention that because the general description of the facility and its purposes had not changed, there had been no fee-bearing changes under the changes clause. Rather, the Board held that Ferguson was entitled to additional fee on the "increased cost resulting from changes increasing the amount and character of the work." *Id.* at 25.

C. Like The Project In *Ferguson*, The MFFF Features Unprecedented And Evolving Designs

Ferguson noted that although the mission of the project did not change, "major changes in cost" were incurred due to the "unprecedented features" of the facility and due to the project's execution strategy, where "construction [was] concurrent with design and unpredictable problems...developed as the technical requirements were adapted to the physical conditions and which were not obvious to those responsible for the original cost estimates." *Id.* at 6. Referring to the classified nature of much of the technology deployed on the project, the Board noted that the deficient cost estimates were "due to ignorance of and the secrecy clothing the technical aspects of the basic process involved." *Id.*

Likewise, here, the "unprecedented features" of the Project are evident. For the first time ever, the Project combines into a single facility two separate and highly complex processes: (1) aqueous polishing, to remove impurities from radioactive material, and (2) MOX fuel fabrication, to mix plutonium with uranium oxide to form MOX fuel pellets and combine them into nuclear reactor fuel assemblies. Moreover, no other facility in the world

⁸ Following contract negotiations Ferguson's employees received security clearances that allowed them access to the process equipment designs as they were completed. *Ferguson*, 57-1 BCA ¶1293 at 5.

conducts these processes on weapons-grade plutonium, much less does any other facility do so within the strictures of the governing NRC regulations.⁹

Nor can it be denied that major design work has proceeded concurrently with the construction of the MFFF structure and the procurement of process equipment. The Project Execution Plan, which is part of the Option 1 contract and was contemporaneous with the 2007 Baseline, stated that the target date to “Complete [Manufacturing Design Group] Design” was November 17, 2008, 19 months later,¹⁰ and to “Complete Facility Design” was February 29, 2010, almost three years after DOE’s Critical Decision 2/3 approval.¹¹

The Root Cause Analysis repeatedly emphasized that the cost increases and schedule delays were caused not by failures on the part of MOX Services, but by the decision to approve the performance baseline and the start of construction when the designs’ immaturity could not support accurate estimates. Noting the “inherent risks in proceeding with nuclear construction at the early stages of design completion,” the Root Cause Analysis remarked that the estimates supporting the CD-2/3 approval were over a year old by that point, and “were based on a level of design that would only support a conceptual level estimate.”¹² Analyzing the history of the Project up to May 2014, the RCA calculated that the design progress was “approximately 35 to 40 percent at the time that the estimate was prepared and approximately 45 to 50 percent at the time that construction started.”¹³

D. Like The Project In *Ferguson*, The Government Was Responsible For The Option 1 Underestimates

Having established that the Project set the performance baseline and started construction before the parties had a solid understanding of the resources and time that would be required to build the facility, the question becomes “Why?” or, more specifically, “Who was responsible for the systematic underestimates?”

Here, as in *Ferguson*, the responsibility lies squarely with the government, thus MOX Services is entitled to fee on the additional costs. Due to external political factors, DOE

⁹ It is not a meaningful distinction of *Ferguson* to observe that whereas *Ferguson* involved the government withholding classified design information from the contractor, the MFFF contract was structured as design-build. Both situations share the critical facts that the government caused the cost estimates to be based on incomplete designs.

¹⁰ This process unit design work did not even include vendors’ fabrication drawing work, which would come later.

¹¹ PEP, Exhibit 17 at 25.

¹² RCA, Exhibit 35 at 2-11.

¹³ *Id.*

directed MOX Services to estimate the Option 1 costs before the designs were sufficiently mature to support accurate estimates.¹⁴

1. 2002: South Carolina Resists Accepting Weapons-Grade Plutonium at the Savannah River Site

The relationship between DOE and the State of South Carolina regarding the State's acceptance of weapons-grade plutonium has long been contentious, and ultimately, this dynamic drove DOE to rush MOX Services to create and submit Option 1 estimates. South Carolina allowed DOE to temporarily store weapons-grade Plutonium at the Savannah River Site only on the condition that DOE have a plan for its disposition, such as processing it into MOX fuel at the Site.

Although DOE and MOX Services entered into the base contract in 1999, it was not until January 23, 2002 that DOE supposedly committed to MOX as its disposition strategy under the PMDA.¹⁵ Soon thereafter, on April 11, 2002, DOE announced that it would begin shipping weapons-grade plutonium to the Savannah River Site to be stored until the MFFF was able to process it.¹⁶ South Carolina wanted to ensure, through a court-recognized consent decree, that DOE would meet its stated time frame for either processing this dangerous material into MOX fuel or shipping it back out of the State. Essentially, South Carolina would agree to accept the Plutonium in exchange for the economic benefit of having a multi-billion dollar facility built and operating in its State.¹⁷ DOE rejected this proposal.¹⁸

A week after DOE's announcement that it would dispose of the plutonium using the MOX process, however, DOE issued an official "Record of Decision" that stated plutonium

¹⁴ MOX Services does not blame DOE for directing MOX Services to prepare and submit Option 1 estimates before there was a solid design basis for them. Nor does MOX Services accuse DOE of acting in bad faith or placing MOX Services under duress. Rather, MOX Services acknowledges that DOE was in a very difficult political bind, and likely had its hand forced by other entities. Even taking this as true, however, does not absolve DOE from liability to pay fee (or adjust fee targets) on the resulting cost increases over the insufficient cost estimates. In this regard, DOE is in the same posture as the Corps of Engineers was in *Ferguson*. There, the Corps of Engineers was the contracting agency liable to pay Ferguson additional fee, but the Chemical Corps was the agency that caused construction to begin before the designs were sufficiently developed. So too here, DOE must pay additional fee (or adjust fee targets) even if political circumstances beyond its control forced DOE to direct MOX Services to submit estimates before the designs were ready.

¹⁵ DOE Jan 23, 2002 Press Release ("Exhibit 87").

¹⁶ DOE Timeline, April 15, 2002 ("Exhibit 88").

¹⁷ *Id.* at April 11-12, 2002.

¹⁸ *Id.*

would be shipped to the Savannah River Site, but that no final decision regarding whether to implement the MOX fuel disposition alternative had been made. *See* 67 Fed. Reg. 19432, 19432 (April 19, 2002). Feeling deceived by DOE's earlier announcement that the MOX solution was a certainty, South Carolina took steps to block the plutonium shipments. First, South Carolina governor Jim Hodges ordered multiple state law enforcement agencies to conduct a joint exercise on April 22, 2002 to prepare to blockade the federal shipments of plutonium into the state.¹⁹ Second, on May 1, 2002, South Carolina filed suit in federal district court to block the shipments. *See Hodges v. Abraham*, 300 F.3d 432, 442 (4th Cir. Aug. 6, 2002).

While South Carolina's court challenge was denied (*id.* at 449), it spurred Congress to pressure DOE to make good on its promise to move forward with the MFFF. On May 1, 2002, the South Carolina congressional delegation introduced legislation that would require DOE to pay South Carolina \$1,000,000 for every day beyond January 1, 2016, that the MOX facility was late in processing certain targeted amounts of plutonium into MOX fuel.²⁰ In recognition of the bargain between South Carolina and the federal government, the statute termed these payments "Economic and impact assistance." 50 U.S.C. §2566(d).

2. 2003-2005: Inability of United States and Russia to Agree to a Liability Protocol and DOE's Response

Having reached a détente with South Carolina, DOE quickly found itself in a difficult political position. In July 2003, the liability protocol under which U.S. companies had provided technical support to Russia's plutonium disposition program expired.²¹ The countries were unable to reach agreement on a new protocol.²² Due to the PMDA's requirement that the countries' disposition programs proceed in rough parallel, in February 2004 the delay in Russia's progress caused DOE to announce a one-year delay in the planned start of U.S. MFFF construction, from May 2004 to May 2005.²³

As the delay in agreeing to a new liability dragged on, the political position of the State of South Carolina became stronger. The State could credibly point out that in 2002 it had fought to avoid the present scenario where it would be left holding weapons-grade Plutonium for an indefinite period with no prospect of the U.S. MFFF being built. The "Economic and impact assistance" provision of 50 U.S.C. §2566 loomed, and, as the liability

¹⁹ Savannah Morning News, "Plutonium Blockade Exercises Scheduled for Monday," (April 21, 2002) ("Exhibit 89").

²⁰ DOE Timeline, May 2, 2002; 50 U.S.C. §2566(c), (d) (enacted December 2, 2002), Exhibit 88.

²¹ Sen. Domenici Press Release, July 19, 2005 ("Exhibit 90").

²² *Id.*

²³ *Id.*

protocol stalemate wore on, the political ability of South Carolina's congressional delegation to fast-track MFFF construction grew.

In this interim, with the future of the MFFF unknown, DOE moved to focus MOX Services' efforts exclusively on producing a licensable design and to scale back MOX Services' work. While completing a design the NRC would license may have been reasonable in the circumstances, DOE's channeling of MOX Services' design work in this way hampered its ability to produce accurate cost and schedule estimates.

- In 2003, DOE began to refuse MOX Services' requests to conduct procurements for fear that Russia would believe that the United States was willing to de-link its commitment to reducing its plutonium stockpile from Russia's.²⁴ This restriction persisted until MOX Services submitted its Option 1 Proposal, and it hampered MOX Services' ability to access vendor information to support its estimating activity.²⁵
- In April 2004, DOE directed MOX Services to plan for a delay in the start of construction and to scale back design work.²⁶ Later, in July 2004, DOE further directed MOX Services to "produc[e] a licensable design by the end of 2004," and to "terminat[e] all non-essential work" not focused on that goal.²⁷
- DOE began to limit funding to the MFFF, such that in July 2004 MOX Services reported that it had incurred more expenses than there were funds allocated to the Project.²⁸
- In July 2004, DOE instituted a hiring freeze on MOX Services, including disallowing MOX Services to backfill vacant positions.²⁹
- In January 2005, DOE notified MOX Services that it had slashed MOX Services' operating funds for FY 2005 from a projected \$77.7 million to \$48

²⁴ See Exhibit 25, Letter DCS-DOE-001103 from T.E. Touchstone, Deputy Project Manager, Duke Cogema Stone & Webster to Patrick Rhoads, MOX Fuel Program Manager, DOE (Sept. 18, 2003); July 2004 MOX Fuel Project Status Report, p. 7 of 181 ("Exhibit 91").

²⁵ See, e.g., July 2004 MOX Fuel Project Status Report, Exhibit 91, p. 7 of 181.

²⁶ April 2004 MOX Fuel Project Report, p. 10 ("Exhibit 92").

²⁷ July 22, 2004 PowerPoint, p. 26 ("Exhibit 93").

²⁸ See Letter DCS-DOE-001741 from Naresh Jain, Director of Procurement, DCS, to David Hess, Contracting Officer, DOE (July 22, 2004) ("Exhibit 94").

²⁹ See Letter from James Bieschke, Director Special Programs Division, DOE to L.R. Barnes, President and COO, Duke Cogema Stone & Webster, LLC (July 2, 2004) ("Exhibit 95").

million. DOE then set priorities for the year that included delaying several activities until FY 2006, and focusing FY 2005 operating expenses on licensing activities.³⁰

All of the foregoing DOE-imposed restrictions on MOX Services diverted MOX Services away from design work necessary to prepare accurate estimates.

3. July 2005 – March 2006: The U.S. and Russia Agree to a Liability Protocol, and DOE Pressures MOX Services to Submit its Option 1 Proposal

On July 19, 2005, after well over two years' delay, the United States and Russia agreed to a liability protocol.³¹ This was more than three years after the spring 2002 stand-off between the State of South Carolina and the federal government over the State's receipt of the Plutonium, and South Carolina was eager finally to receive its benefit of the bargain – the beginning of MFFF construction.

The day after the liability protocol was reached, DOE notified MOX Services that it would exercise Option 1 of the MFFF contract.³² After hamstringing MOX Services' estimating efforts until the liability protocol was settled, in its notification letter, DOE directed MOX Services to submit a technical and cost proposal for Option 1 by November 1, 2005.

In reply, MOX Services informed DOE that it would not be able to submit an Option 1 proposal until January 2006, a supposed delay that NNSA found “not acceptable.”³³ NNSA again instructed MOX Services to submit its proposal by November 1, 2005, and also to provide NNSA with weekly updates on its progress.³⁴ In doing so, NNSA made clear that external budgetary pressures drove its dictated schedule, and not the best interests of the Project. NNSA explained that among its reasons for demanding the Option 1 proposal so soon was to remain “consistent with ... the President's fiscal year 2006 budget request to

³⁰ See Letter from James Bieschke, Director Special Programs Division, DOE to L.R. Barnes, President and COO, Duke Cogema Stone & Webster, LLC (Jan. 7, 2005) (“Exhibit 96”).

³¹ Sen. Domenici Press Release, Exhibit 90. In March 2005, MOX Services had received approval from the NRC to begin construction.

³² See Exercise of Unexercised Segments (Remainder) of Option 1, Exhibit 65.

³³ See Letter from Martin Newdorf, Federal Project Director, NNSA, to L.R. Barnes, President and COO, Duke Cogema Stone & Webster, LLC (Aug. 1, 2005) (“Exhibit 97”).

³⁴ *Id.*

Congress.”³⁵ NNSA warned MOX Services that meeting the November 1, 2005 deadline was necessary to “efforts to maintain funding for the MOX FFF project.”³⁶

Three days later, MOX Services provided a plan to support structural construction start by May 2006 without shortcutting the estimating process.³⁷ MOX Services listed several reasons why preparing reasonably accurate cost estimates by the proposal date was unrealistic under the circumstances. These reasons included that changes in funding profiles had delayed its ability to produce the “extremely important...highest confidence cost estimates”; that MOX Services needed more time to add detail and content to preliminary estimates in order to support DOE’s and DCAA’s “timely review and approval of cost proposals” and to incorporate the greater amount of available design information; and that “[d]ue to DOE restrictions against vendor interactions, the existing cost estimates reflect little vendor pricing.”³⁸ MOX Services concluded:

[T]he work required to develop high confidence cost estimates in a form suitable for baselining the project and for submitting a compliant cost proposal added to the work anticipated to resource-load and manipulate/iterate the integrated cost project schedule to meet the annual funding constraints cannot be accomplished by 01 November 2005.³⁹

DOE and MOX Services exchanged a second set of contentious letters on the scheduling of MOX Services’ Option 1 estimates on August 12 and August 18, 2005, respectively. DOE called MOX Services’ inability to submit an Option 1 proposal on DOE’s schedule “non-responsive” and “not acceptable,” and the Agency repeated its direction to MOX Services to provide an Option 1 proposal by November 1, 2005.⁴⁰ Again, DOE explained that the budgeting cycle drove the agency to rush MOX Services’ Option 1 proposal, and again DOE threatened that its unilaterally imposed schedule was needed “to maintain funding for the [MFFF].”⁴¹ MOX Services responded six days later, and again explained why it was not possible to submit an accurate and sufficiently detailed Option 1

³⁵ *Id.*

³⁶ *Id.*

³⁷ See Letter from L.R. Barnes, President and COO, Duke Cogema Stone & Webster, LLC to Martin Newdorf, Federal Project Director, NNSA (Aug. 4, 2005) (“Exhibit 98”).

³⁸ *Id.*

³⁹ *Id.*

⁴⁰ See Letter from John Motz, Contracting Officer, DOE to L.R. Barnes, President and COO, Duke Cogema Stone & Webster, LLC (Aug. 12, 2005) (“Exhibit 99”).

⁴¹ *Id.*

proposal on DOE's schedule.⁴² Again requesting the funding profile it was to assume for estimating purposes, MOX Services noted the tremendous complexity inherent in scheduling multiple years of many functional areas within a given funding profile, where the integrated Project schedule contained 26,000 distinct activities.⁴³

With the process of contracting for the construction of the MFFF unresolved, the State of South Carolina and the South Carolina congressional delegation kept the pressure on DOE to move the Project into the construction phase. On September 21, 2005, Aiken County, South Carolina filed suit in federal court alleging that the Department of Energy had not met its obligations under the 2002 legislation that stemmed from South Carolina's threatened blockade against the DOE transport of Plutonium to the Savannah River Site.⁴⁴ Among Aiken County's specific complaints was that DOE had failed timely to submit a reviewed construction and operations schedule for the MFFF following the resolution of the Russian liability protocol issue.

For its part, on October 14, 2005, the entire South Carolina congressional delegation held a groundbreaking ceremony for the MFFF at the Savannah River Site.⁴⁵ At the ceremony, Representative J. Gresham Barrett made clear that the delegation would continue to press DOE to uphold its promise to build the MFFF, and not just store the Plutonium at the Savannah River Site indefinitely. Stating that "today we begin to see concrete evidence that new missions are coming to the site," Rep. Barrett promised that "the entire delegation will continue to work together to ensure our state never becomes a dumping ground."⁴⁶ The DOE joined in the sentiment. At the groundbreaking, Rep. Barrett read from a letter sent to him the previous day by Energy Secretary Sam Bodman. The excerpt stated: "Resolving the liability issue was an important achievement, and the Administration remains strongly committed to moving forward with construction of the MOX facility in South Carolina."⁴⁷

The South Carolina delegation was forceful in imploring DOE to start MFFF construction. In a hearing on February 16, 2006, South Carolina Senator Lindsey Graham pressed Secretary Bodman to start Project construction. Sen. Graham stated: "[M]y hope is that [soon] ... we can assure people in South Carolina that the money [for the Project] will be there, that we will get the program up and running, then the delays, we're about three years

⁴² See Letter DCS-DOE-002205 from L.R. Barnes, President and COO, Duke Cogema Stone & Webster, LLC to John Motz, Contracting Officer, DOE (Aug. 18, 2005) ("Exhibit 100").

⁴³ *Id.*

⁴⁴ See Complaint in *Aiken County v. Bodman et al.*, 1:05-cv-02737-RBH (Dist. Of South Carolina, Sept. 21, 2005) ("Exhibit 101").

⁴⁵ October 14, 2005, Rep. Barrett Press Release ("Exhibit 102").

⁴⁶ *Id.*

⁴⁷ *Id.*

behind, that we're committed to making it happen." Secretary Bodman responded: "All of that – we are committed absolutely to making it happen."

In a later hearing on March 6, 2006, Sen. Graham strongly urged NNSA Director Linton Brooks to break ground on the Project. Noting that his state had "stepped up to the plate again and we took plutonium that we didn't generate," Sen Graham asked Mr. Brooks for "reassure[ance] ... that we're going to get on with this, South Carolina is not going to get stuck with this plutonium..." Mr. Brooks replied: "Yes, sir. Senator, we're going to break ground and begin construction on the MOX Fuel Fabrication Facility later this year, sometime in the early fall."

Shortly thereafter, Sen. Graham issued a press release announcing that 320 new employees would be hired by the end of 2006 to excavate the MOX site and pour the concrete foundation.⁴⁸

4. NNSA Required MOX Services To Submit Its Option 1 Proposal Before The Designs Were Sufficiently Complete

In its letters to NNSA on August 4 and 18, 2005, MOX Services repeatedly explained that its schedule and cost estimates for Option 1 would be determined in significant measure by the funding profile on which MOX Services' planning would be based. In answer to MOX Services' appeals for this information, on September 8, 2005, NNSA provided MOX Services with a funding profile to use in developing the detailed cost and schedule baseline for the MFFF.⁴⁹ That funding profile replaced one NNSA had provided in June 2005.⁵⁰ The new profile called for MOX Services to prepare its estimates assuming Total Project Cost funding of \$388,565,000 for fiscal year 2006, which was then only three weeks away.

Ten weeks later, on November 21, 2005, in the midst of MOX Services' push to develop Option 1 estimates, DOE changed the FY 2006 funding profile once again, lowering it by nearly one-third, to \$242,800,000.⁵¹ In light of MOX Services' repeated appeals for DOE to provide a funding profile on which it could rely, these great changes in funding assumptions injected significant turmoil and uncertainty into the estimating process.

⁴⁸ See Sen. Lindsey Graham, Press Release, "500 Jobs Coming to Savannah River Site" (May 1, 2006 ("Exhibit 103")).

⁴⁹ See Letter from Martin Newdorf, Federal Project Director, NNSA to L.R. Barnes, President and COO, Duke Cogema Stone & Webster, LLC (Sept. 8, 2005) ("Exhibit 104").

⁵⁰ *Id.*; see also Letter DOE-DCS-001007 from Martin Newdorf, Federal Project Director, NNSA to L.R. Barnes, President and COO, Duke Cogema Stone & Webster, LLC (June 29, 2005) ("Exhibit 105").

⁵¹ See Letter from Martin Newdorf, Federal Project Director, NNSA to L.R. Barnes, President and COO, Duke Cogema Stone & Webster, LLC (Nov. 21, 2005) ("Exhibit 106").

On March 15, 2006, MOX Services submitted its Option 1 proposal.⁵² This was based in significant part on documentation to support CD-2/3, including scope, cost, and schedule information, that MOX Services had submitted a month earlier.⁵³ At the time of the proposal, NNSA was well aware that the MFFF designs were not sufficiently complete to support accurate cost estimates.⁵⁴

On November 10, 2005, NNSA required MOX Services to begin calculating and reporting its cumulative percentage complete for Option 1.⁵⁵ This “Joule Performance Metric” weighted design (20%), construction (65%) and startup (15%). MOX Services reported its February 2006 Joule Metric to be 14.8%, 14.6% of which represented design completion.⁵⁶ Thus, overall, MOX Services was reporting that the MFFF design was 73% complete ($14.6\%/20\% = 73\%$). And, indeed, in the Option 1 proposal, MOX Services estimated design completion percentages that were even lower than those contained in the February 2006 Report. Whereas the February Report stated that the cumulative progress percentages were 87.2% for MFFF engineering work and 54.5% for equipment design work,⁵⁷ the Option 1 proposal estimated these figures at 85% and 50%, respectively.⁵⁸ Overall, then, the Option 1 proposal estimated design completion to be no more than 70%.⁵⁹

⁵² See Letter DCS-DOE-002464 from David Stinson, President and Project Manager, Duke Cogema Stone & Webster, LLC, to Jim Bieschke, Contracting Officer, DOE (Mar. 15, 2006) (“Exhibit 107”).

⁵³ See Letter DCS-DOE-002429 from David Stinson, President, Duke Cogema Stone & Webster, LLC, to Martin Newdorf, Federal Project Director, NNSA (Feb. 16, 2006) (“Exhibit 108”).

⁵⁴ For the purpose of forming well-grounded and accurate estimates, the sophistication and experience of the companies that comprise MOX Services, though tremendously valuable to a project of the MFFF’s complexity, is no substitute for reasonably complete designs. To be entitled to an adjustment to the Total Project Cost, the Option 1 contract need not have contained a clause for reopening cost negotiations. The contract’s changes clause is amply broad enough to support the required adjustment to the Total Project Costs for the future cost impacts of that resulted from incomplete designs at the time of estimating.

⁵⁵ See Letter from Martin Newdorf, Federal Project Director, NNSA to L.R. Barnes, President, Duke Cogema Stone & Webster, LLC (Nov. 10, 2005) (“Exhibit 109”).

⁵⁶ See February 2006 MOX Fuel Project Status Report, at p. 2 (“Exhibit 110”). This Report stated that the equipment design work was 54.5% complete as of the end of February.

⁵⁷ *Id.*

⁵⁸ Option 1 Proposal, Exhibit 30 at 1-3.

⁵⁹ Another aspect of the estimates, discussed in greater detail in Section V of this Claim, bears mentioning here. In many cases, the estimates assumed that the craft work would be subcontracted on a fixed price basis to vendors who would design the commodity installation, as well as the installation. See, e.g., Exhibit 30, Utility Equipment & Piping

Importantly, NNSA knew that MOX Services could not have prepared accurate Option 1 estimates for MFFF construction with such incomplete designs, yet it pressed for them anyway.⁶⁰ The DOE-commissioned External Independent Review of CD 2/3 conducted shortly after MOX Services submitted its Option 1 proposal warned that the 85% Design Review required under DOE Manual 413.3-1 was performed only on the CP-20 structural construction package.⁶¹

The Manual, at Chapter 6.7, requires that all design and engineering be “essentially complete” before beginning implementation and procurement activities. Yet, as of July 2006, NNSA’s 85% Design Reviews of major Construction Packages were scheduled to be conducted months or years later.⁶² And, in most cases these 85% Design Reviews were to be followed by their own External Independent Reviews.⁶³ These deficiencies, which were emphasized in the 2014 Root Cause Analysis,⁶⁴ were highlighted to NNSA Administrator Linton Brooks in a July 2006 memorandum from his Associate Administrator for Infrastructure and Environment. There, Administrator Brooks was warned that, among other things, (1) design reviews had not been performed on major construction packages, (2) contingency estimates had been developed only on “the design completed to date and not the full MOX Project,” and (3) “[f]irst-of-a-kind, new technology complex large scale projects typically carry contingency estimates in the 50%-100% range of the to-go costs.”⁶⁵ The

Element Definition (stating that the fixed priced subcontractor would design and install various equipment, pipes, valves, etc.); Exhibit 30, Fire Protection Element Definition (stating that the “Fire Protection” subcontractor would design and install all fire protection systems). And, as stated repeatedly in the Option 1 proposal documents and related correspondence (*see, e.g.*, Exhibit 20 at p. 4; Exhibit 23 at p. 12; Exhibit 66 at p. 28), the Element Definitions often included the express assumption that ASME NQA1-qualified vendors were available. *See, e.g.*, Exhibit 30, Electrical Element Definition; Exhibit 30, HVAC Element Definition.

⁶⁰ MOX Services does not contend that either it or the government knew that the Option 1 estimates would prove to be inaccurate; rather, the record shows that at the time there was insufficient information available about the true scope of the Project for the parties to draw founded conclusions about the likely accuracy of the estimates.

⁶¹ Exhibit 31, EIR (May 2006) at p. 4.

⁶² *See* Exhibit 111, Memorandum from Bruce Scott to Linton F. Brooks (July 9, 2006), Design Review Schedule Attachment. This Schedule called for the following reviews: CP 22, BMP Instrumentation (Nov. 20, 2008); CP 23, MFFF HVAC (Oct. 31, 2006); CP 27, AP Piping (Sept. 25, 2006); and CP 28, AP Instrumentation (Jan. 10, 2007).

⁶³ *Id.*

⁶⁴ *See* Exhibit 35, RCA, at p. 2-13 (discussing the Project risks introduced when DOE/NNSA fast-tracked the MFFF procurement and construction based on insufficient designs).

⁶⁵ Exhibit 111, at p. 2.

memorandum concluded by counseling against authorizing Critical Decision 2 to establish the performance baseline.⁶⁶

Validating what NNSA knew at the time of the Option 1 estimates, the 2014 Root Cause Analysis repeatedly cited the underdevelopment of designs as a major cause for the insufficient estimates contained in the 2007 Baseline. The RCA faulted the 2007 Baseline approval for being based on “incomplete front-end planning,” stating that the early cost estimates “were based on a level of design that would only support a conceptual level estimate.”⁶⁷ The RCA further concluded that the earliness of the CD-2/3 cost estimate led to an under appreciation of the difficulty of translating the French reference plant design to the U.S. MFFF.⁶⁸

E. Conclusion: MOX Services Is Entitled To Adjustment To The Target Cost For MFFF Systems Construction That DOE Caused To Be Underestimated in Option 1

The circumstances presented here are substantially similar to those in *Ferguson*. In both cases the contracting agency was responsible for causing the contractor to submit estimates and negotiate the associated fee when the available designs were insufficient to support accurate estimates. And, just as the late-arriving designs in *Ferguson* caused space redesigns, utilities growth, and increased level-of effort (57-1 BCA ¶1293 at 22, 25), here, too, the evolving designs during construction caused MOX Services to incur significantly higher than anticipated costs. Two examples illustrate the similarities between *Ferguson* and this matter.

First, in *Ferguson* many of the process unit designs were classified when the contract was negotiated, thus the government was responsible for their unavailability to the contractor. Likewise here, as more fully explained in the PUDC Section of this Claim, due to concerns over the Russian parallelism requirement, DOE did not allow MOX Services to conduct pre-Option 1 pilot procurements with process unit vendors. See Claim Section III.

As was revealed when MOX Services conducted such pilots much later, contrary to the parties’ expectations when the estimates for Option 1 were established, the French reference plant designs did not translate nearly so fluently or eloquently across the decades and into the NRC’s strict regulatory regime. Ultimately, the Project diverged substantially from the “replicate the French plants” principle underlying many of the cost estimates. In these circumstances, no less so than in the case of *Ferguson*’s classified designs, the

⁶⁶ *Id.* at p. 3. The Root Cause Analysis notes that NNSA has since directed that design must be at least 90% complete before Critical Decision 2, a mark that the MOX Project was far from meeting. Exhibit 35, RCA, at p. 2-12 (citing NA-APM Memorandum, Ninety Percent Design Implementation Guidance for [NNSA] Construction Projects, August 9, 2012).

⁶⁷ Exhibit 35, RCA at 2.3 CID-3.

⁶⁸ *Id.* at 2.5.1 CF1; 2.6.3 CF3.

government was responsible for the critical information deficit at the time of the Option 1 estimates.

Second, the bacterial warfare facility in *Ferguson* worked under a number of unique and burdensome safety requirements. An earlier accidental exposure of workers to bacterial agents caused the process equipment developer “to become very safety conscious, and it inaugurated safety standards which greatly increased the complexity and expense of the project.” 57-1 BCA ¶1293 at 10. Among the unanticipated costs associated with the safety features, the facility in *Ferguson* required special cement plaster finish on all interior walls, venting hoods on all bacteria work cabinets that cost “considerably in excess of that originally contemplated,” air locks and door controls to segregate particular rooms, a special, dedicated water supply, and unique stainless steel piping constructed under very stringent requirements, including “a special welding process” that required “special techniques and procedures.” *Id.* at 1-5, 7.

So too here, as found by the DOE-commissioned Root Cause Analysis, in many instances safety systems (“IROFS”) “were selected on the basis of overly conservative assumptions intended to accommodate design uncertainty that existed at the time that the license application was submitted to the NRC.”⁶⁹ For example, the gloveboxes were considered IROFS for primary confinement protection of radioactive material in an earthquake. Further, each process room was designed to be a segregated fire barrier, a scheme that the RCA concluded “was overly complex and conservative.”⁷⁰

Importantly, as in *Ferguson*, the Project record gives every indication that the parties had little appreciation for the cost impacts the conservative decisions regarding IROFs would impose on the Project. This is because DOE required MOX Services to focus on achieving a licensable design, and not a design that was relatively straightforward to estimate or construct. It was also due to NNSA requiring MOX Services to submit the estimates on which Option 1 would be based well before anyone had a firm grasp of just how usable the French reference plant designs would be or how difficult it would be to meet the NRC’s stringent licensing requirements. The record shows that the government did so for political reasons and expediency.

In sum, when time proved the estimating basis, *i.e.*, the designs, to be unsound, the *Ferguson* Board found the “conclusion ... inescapable that the work actually performed by [the contractor] materially exceeded in amount and character the work contemplated by the contract.” 57-1 BCA ¶1293 at 22. Because the government was responsible for the original low estimates’ failure to reflect the work the contractor actually performed and not the contractor’s own errors or omissions, the Board concluded that *Ferguson* was entitled to fee on the additional costs. *Id.* at 25. Likewise here, DOE was responsible for MOX Services’ Option 1 estimates being unrealistically low, and accordingly, DOE is liable to adjust the

⁶⁹ RCA, Exhibit 35 at 2-9.

⁷⁰ *Id.*

Total Project Cost to account for the additional MFFF systems construction costs MOX Services has experienced on the Project.

CB&I AREVA MOX Services, LLC.
MFFF Construction Change Claim Summary

Schedule 5.0

	[A]	[B]	[C] = B - A	[D]
	<u>2007 Baseline</u>	<u>2012 Rebaseline with Addendum</u>	<u>Cost Growth</u>	<u>Claim Amount</u>
MFFF Construction Change Costs	\$ 1,095,548,855	\$ 2,295,415,649	\$ 1,199,866,793	\$ 1,198,566,862

Sources:

Schedule 5.01

Schedule 5.01

CB&I AREVA MOX Services, LLC.
MFFF Construction Change Summary

	[A]	[B]	[C] = B - A	[D]
Category Description	2007 Baseline	2012 Rebaseline with Addendum	Cost Growth	Claim Amount
Installation	\$ 817,738,444	\$ 1,602,357,424	\$ 784,618,980	\$ 783,349,620
Materials	244,861,751	601,793,073	356,931,323	356,920,702
Total - Installation and Materials	\$ 1,062,600,195	\$ 2,204,150,497	\$ 1,141,550,303	\$ 1,140,270,322
Title III Engineering	32,948,661	91,265,151	58,316,491	58,296,541
Total	\$ 1,095,548,855	\$ 2,295,415,649	\$ 1,199,866,793	\$ 1,198,566,862

Sources:

Schedule 5.1

CB&I AREVA MOX Services, LLC.

Schedule 5.1

MFFF Construction Change - Adjustment for Non-DCS Costs

	[A]	[B]	[C] = B - A	
Description	2007 Baseline	2012 Rebaseline with Addendum	Cost Growth	Support Schedule
Installation	\$ 817,738,444	\$ 1,602,357,424	\$ 784,618,980	Schedule 5.3
Less: Non-DCS Costs			1,269,360	Schedule 5.2
Claim Amount			\$ 783,349,620	
Materials	244,861,751	601,793,073	\$ 356,931,323	Schedule 5.3
Less: Non-DCS Costs			10,621	Schedule 5.2
Claim Amount			\$ 356,920,702	
Title III Engineering	32,948,661	91,265,151	58,316,491	Schedule 5.3
Less: Non-DCS Costs			19,950	Schedule 5.2
Claim Amount			\$ 58,296,541	
Total MFFF Construction Change Claim Amount			\$ 1,198,566,862	

CB&I AREVA MOX Services, LLC.
MFFF Construction Change - Non-DCS Cost Detail

[A] [B] [C] = B - A

Cost Account	Cost Account Description	CE Code	CE Description	2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1721.2101	Site Preparation	ND	Non-DCS Cost	\$ 28,296,998	\$ 28,442,240	\$ 145,242
1722.2202	F" Road"	ND	Non-DCS Cost	2,736,821	2,793,506	56,685
1724.2401	Underground Utilities	ND	Non-DCS Cost	3,029	145,189	142,160
1725.2501	Yard Fire Protection	ND	Non-DCS Cost	-	2,305	2,305
1728.2801	Yard Electrical & Lighting	ND	Non-DCS Cost	-	11,481	11,481
1731.3150	Administration Building	ND	Non-DCS Cost	-	58,950	58,950
1733.3350	Secured Warehouse Building	ND	Non-DCS Cost	-	227	227
1734.3450	Tech Support & Access Control Building	ND	Non-DCS Cost	-	1,663	1,663
1741.4100	Building Structure	ND	Non-DCS Cost	1,623,845	1,612,899	(10,946)
1751.5100	Building Structure	ND	Non-DCS Cost	865,045	859,223	(5,822)
1751.5150	Process Piping & Equipment	ND	Non-DCS Cost	-	884	884
1761.6100	Building Structure	ND	Non-DCS Cost	998,353	991,832	(6,521)
1772.7210	Architectural Features	ND	Non-DCS Cost	-	-	-
1774.7410	Miscellaneous Procured Services	ND	Non-DCS Cost	-	261,097	261,097
1774.7416	Independent Test Lab	ND	Non-DCS Cost	-	582,588	582,588
1774.7417	NDE Testing	ND	Non-DCS Cost	-	29,368	29,368
Subtotal - Installation				\$ 34,524,091	\$ 35,793,451	\$ 1,269,360
1774.7433	Instrumentation & Controls Material	ND	Non-DCS Cost	\$ -	\$ 163	\$ 163
1774.7438	Mechanical Equipment	ND	Non-DCS Cost	-	10,458	10,458
1774.7439	Consumable & Expendable Materials Specific to CP-27 – BAP Chemical P	ND	Non-DCS Cost	-	-	-
Subtotal - Materials				\$ -	\$ 10,621	\$ 10,621
1003.8034	Electrical / I&C Site Construction Support	ND	Non-DCS Cost	-	19,950	19,950
Subtotal - Title III Engineering				\$ -	\$ 19,950	\$ 19,950
Total				\$ 34,524,091	\$ 35,824,022	\$ 1,299,931

Sources:

[A] May 2007 PRISM Data adjusted for budget transfers between July 2007 and September 2012

[B] 2012 contract proposal value as stated in December 2012 PRISM data and adjusted for 2012 Rebaseline Addendums

[C] Calculated

CB&I AREVA MOX Services, LLC.
MFFF Construction Change Cost Growth by Cost Account

Schedule 5.3

Cost Account	Functional Area Descriptions	Cost Account Description	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1721.2101	Site Preparation	Site Preparation	\$ 29,136,316	\$ 29,492,485	\$ 356,169
1722.2201	Roads & Parking	Roads & Parking	1,853,353	1,770,466	(82,887)
1722.2202	Roads & Parking	F" Road"	5,529,770	3,767,924	(1,761,846)
1723.2301	Yard Structures	Yard Structures	2,222,753	3,861,339	1,638,586
1723.2501	Yard Structures		-	-	-
1724.2401	Underground Utilities	Underground Utilities	10,809,194	21,315,647	10,506,454
1725.2501	Yard Fire Protection	Yard Fire Protection	2,374,082	3,091,847	717,765
1726.2601	Chillers	Chillers	3,996,349	6,597,688	2,601,339
1727.2701	Site Security / PIDAS	Site Security and Perimeter Intrusion Detection and Assessment Syste	33,756,358	46,557,859	12,801,501
1728.2801	Yard Electrical & Lighting	Yard Electrical & Lighting	6,479,079	6,076,996	(402,083)
1729.2901	Landscaping	Landscaping	438,164	334,321	(103,843)
1731.3150	Administration Building (BAD)	Administration Building	8,158,478	11,047,671	2,889,193
1732.3250	Receiving Warehouse Building	Receiving Warehouse Building	2,342,535	1,257,230	(1,085,305)
1732.3550	Receiving Warehouse Building		1	-	(1)
1733.3350	Secured Warehouse Building	Secured Warehouse Building	3,768,379	4,429,712	661,333
1734.3450	Tech Support & Access Control Bldg.	Tech Support & Access Control Building	7,129,799	20,551,164	13,421,365
1735.3550	Standby Diesel Generator Bldg.	Standby Diesel Generator Building	3,573,745	-	(3,573,745)
1735.3556	Standby Diesel Generator Bldg.	Standby Diesel Generator System/Equip.	-	-	-
1736.3652	Emergency Diesel Generator Bldg.	Civil / Structural / Architectural	1,234,783	12,694,518	11,459,735
1736.3653	Emergency Diesel Generator Bldg.	Mechanical / Piping	1,519,602	5,681,459	4,161,857
1736.3654	Emergency Diesel Generator Bldg.	Electrical	2,419,944	12,245,457	9,825,513
1736.3655	Emergency Diesel Generator Bldg.	I&C	386,727	672,465	285,738
1736.3656	Emergency Diesel Generator Bldg.	Emerg.Diesel Gen.System/Equipment	7,797,805	10,668,334	2,870,529
1737.3751	Reagents Process Building	Design	1,400,000	3,061,059	1,661,059
1737.3752	Reagents Process Building	Civil / Structural / Architectural	1,852,989	2,335,417	482,428
1737.3753	Reagents Process Building	Mechanical / Piping	7,584,611	2,577,658	(5,006,953)
1737.3754	Reagents Process Building	Electrical	3,535,409	916,676	(2,618,733)
1737.3755	Reagents Process Building	I&C	5,243,898	58,855	(5,185,043)
1737.3756	Reagents Process Building	Reagent Systems Equipment / Piping	824,061	9,741,737	8,917,676
1741.4100	MOX Process Area Level 1	Building Structure	42,141,101	48,980,823	6,839,722
1741.4110	MOX Process Area Level 1	Architectural Features	1,286,559	12,573,673	11,287,114
1741.4120	MOX Process Area Level 1	HVAC	5,143,021	36,376,411	31,233,390
1741.4130	MOX Process Area Level 1	MOX Processing Area (BMP) – MOX Processing Area – Level 1 – Fire Pro	5,210,678	12,698,949	7,488,272
1741.4140	MOX Process Area Level 1	Utility Equipment & Piping	4,467,807	2,083,905	(2,383,902)
1741.4150	MOX Process Area Level 1	Process Piping	14,137,249	17,941,478	3,804,229
1741.4170	MOX Process Area Level 1	Other Equipment	7,913,483	7,094,780	(818,703)
1741.4180	MOX Process Area Level 1	Electrical	12,710,594	47,210,472	34,499,878
1741.4190	MOX Process Area Level 1	Instrumentation	13,114,418	2,734,549	(10,379,870)
1742.4200	MOX Process Area Level 2	Building Structure	22,770,514	35,620,852	12,850,338
1742.4210	MOX Process Area Level 2	Architectural Features	(191,335)	4,607,399	4,798,734
1742.4220	MOX Process Area Level 2	HVAC	7,638,103	20,971,266	13,333,163
1742.4230	MOX Process Area Level 2	MOX Processing Area (BMP) – MOX Processing Area – Level 2 – Fire Pro	6,021,572	14,596,534	8,574,962

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Cost Account	Functional Area Descriptions	Cost Account Description	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1742.4240	MOX Process Area Level 2	Utility Equipment & Piping	1,220,714	42,641	(1,178,073)
1742.4250	MOX Process Area Level 2	Process Piping	7,971,156	11,361,603	3,390,447
1742.4270	MOX Process Area Level 2	Other Equipment	2,454,660	2,570,349	115,689
1742.4280	MOX Process Area Level 2	Electrical	14,912,858	29,359,393	14,446,535
1742.4290	MOX Process Area Level 2	Instrumentation	7,707,535	1,728,847	(5,978,688)
1742.4600	MOX Process Area Level 2		(167)	-	167
1743.4300	MOX Process Area Level 3	Building Structure	-	28,748,394	28,748,394
1743.4310	MOX Process Area Level 3	Architectural Features	215,717	5,178,527	4,962,810
1743.4320	MOX Process Area Level 3	HVAC	15,793,051	36,243,152	20,450,100
1743.4330	MOX Process Area Level 3	MOX Processing Area (BMP) – MOX Processing Area – Level 3 – Fire Pro	6,408,576	9,592,492	3,183,916
1743.4340	MOX Process Area Level 3	Utility Equipment & Piping	1,757,160	104,868	(1,652,292)
1743.4350	MOX Process Area Level 3	Process Piping	14,311,410	14,276,183	(35,227)
1743.4370	MOX Process Area Level 3	Other Equipment	114,045	1,178,593	1,064,548
1743.4380	MOX Process Area Level 3	Electrical	14,716,737	33,580,847	18,864,110
1743.4390	MOX Process Area Level 3	Instrumentation	18,198,930	19,678,197	1,479,267
1744.4400	MOX Process Area Roof/Other	Building Structure	837,780	12,198,268	11,360,488
1744.4410	MOX Process Area Roof/Other	Architectural Features	79,148	-	(79,148)
1744.4420	MOX Process Area Roof/Other	HVAC	353,456	2,882,398	2,528,942
1744.4430	MOX Process Area Roof/Other	MOX Processing Area (BMP) – MOX Processing Area – Level 4 – Fire Pr	249,976	83,530	(166,446)
1744.4440	MOX Process Area Roof/Other	Utility Equipment & Piping	581,867	610,698	28,831
1744.4480	MOX Process Area Roof/Other	Electrical	78,559	946,936	868,377
1744.4490	MOX Process Area Roof/Other	Instrumentation	(39,748)	52,684	92,432
1746.4600	MOX Process Area Equipment Installation	Fuel Assembly / Rods	4,898,683	4,513,528	(385,155)
1746.4610	MOX Process Area Equipment Installation	Powder & Pellets	18,241,062	13,852,934	(4,388,128)
1746.4620	MOX Process Area Equipment Installation	Furnaces & Pellet Storage	3,989,918	3,217,081	(772,837)
1746.4630	MOX Process Area Equipment Installation	PuO2 Receiving, Storage & Decanning	3,434,938	1,593,800	(1,841,138)
1746.4640	MOX Process Area Equipment Installation	Labs & Testing	36,210,885	35,673,183	(537,702)
1751.5100	AP Process Area Level 1	Building Structure	18,030,779	21,310,875	3,280,096
1751.5110	AP Process Area Level 1	Architectural Features	205,275	7,294,497	7,089,222
1751.5120	AP Process Area Level 1	HVAC	2,289,145	8,716,658	6,427,513
1751.5130	AP Process Area Level 1	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 1 –	1,247,530	1,801,582	554,052
1751.5140	AP Process Area Level 1	Utility Equipment & Piping	3,277,473	1,933,426	(1,344,046)
1751.5150	AP Process Area Level 1	Process Piping & Equipment	20,664,387	63,273,713	42,609,326
1751.5170	AP Process Area Level 1	Other Equipment	998,403	2,006,893	1,008,490
1751.5180	AP Process Area Level 1	Electrical	2,199,273	17,201,810	15,002,537
1751.5190	AP Process Area Level 1	Instrumentation	2,886,311	776,284	(2,110,026)
1751.5250	AP Process Area Level 1		-	-	-
1751.5700	AP Process Area Level 1		-	-	-
1752.5200	AP Process Area Level 2	Building Structure	5,326,583	9,451,743	4,125,160
1752.5210	AP Process Area Level 2	Architectural Features	(11,660)	1,248,731	1,260,391
1752.5220	AP Process Area Level 2	HVAC	3,076,650	5,815,594	2,738,943
1752.5230	AP Process Area Level 2	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 2 –	772,172	1,481,053	708,881

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Cost Account	Functional Area Descriptions	Cost Account Description	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1752.5240	AP Process Area Level 2	Utility Equipment & Piping	799,083	668,407	(130,676)
1752.5250	AP Process Area Level 2	Process Piping & Equipment	22,325,326	103,387,615	81,062,289
1752.5270	AP Process Area Level 2	Other Equipment	1,739,491	451,468	(1,288,023)
1752.5280	AP Process Area Level 2	Electrical	4,274,729	14,240,247	9,965,518
1752.5290	AP Process Area Level 2	Instrumentation	3,457,434	979,949	(2,477,485)
1753.5300	AP Process Area Level 3	Building Structure	7,043,044	18,004,541	10,961,497
1753.5310	AP Process Area Level 3	Architectural Features	(7,882)	1,752,632	1,760,514
1753.5320	AP Process Area Level 3	HVAC	2,842,768	5,006,959	2,164,191
1753.5330	AP Process Area Level 3	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 3 –	803,128	1,850,451	1,047,323
1753.5340	AP Process Area Level 3	Utility Equipment & Piping	570,699	240,601	(330,098)
1753.5350	AP Process Area Level 3	Process Piping & Equipment	12,311,041	15,128,246	2,817,205
1753.5370	AP Process Area Level 3	Other Equipment	6,140	729,933	723,793
1753.5380	AP Process Area Level 3	Electrical	8,088,441	16,393,472	8,305,031
1753.5390	AP Process Area Level 3	Instrumentation	4,125,471	1,390,017	(2,735,454)
1754.5400	AP Process Area Level 4	Building Structure	-	5,868,741	5,868,741
1754.5410	AP Process Area Level 4	Architectural Features	27,732	1,700,960	1,673,228
1754.5420	AP Process Area Level 4	HVAC	2,895,119	4,469,887	1,574,769
1754.5430	AP Process Area Level 4	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 4 –	987,070	2,143,927	1,156,857
1754.5440	AP Process Area Level 4	Utility Equipment & Piping	1,509,067	1,364,002	(145,065)
1754.5450	AP Process Area Level 4	Process Piping & Equipment	10,269,733	15,901,164	5,631,431
1754.5470	AP Process Area Level 4	Other Equipment	585,252	503,476	(81,776)
1754.5480	AP Process Area Level 4	Electrical	4,732,941	16,215,664	11,482,723
1754.5490	AP Process Area Level 4	Instrumentation	7,283,214	814,419	(6,468,795)
1754.5540	AP Process Area Level 4		2,231	-	(2,231)
1755.5500	AP Process Area Level 5	Building Structure	-	10,560,583	10,560,583
1755.5510	AP Process Area Level 5	Architectural Features	130,702	2,112,694	1,981,992
1755.5520	AP Process Area Level 5	HVAC	3,234,191	9,439,141	6,204,950
1755.5530	AP Process Area Level 5	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 5 –	1,653,686	1,390,009	(263,677)
1755.5540	AP Process Area Level 5	Utility Equipment & Piping	2,235,565	2,042,028	(193,537)
1755.5550	AP Process Area Level 5	Process Piping & Equipment	12,301,514	9,663,694	(2,637,820)
1755.5570	AP Process Area Level 5	Other Equipment	353,332	213,102	(140,230)
1755.5580	AP Process Area Level 5	Electrical	3,703,393	13,361,396	9,658,003
1755.5590	AP Process Area Level 5	Instrumentation	13,320,716	15,438,044	2,117,327
1756.5600	AP Process Area Roof/Other	Building Structure	6,165,298	5,340,300	(824,998)
1756.5670	AP Process Area Roof/Other	Other Equipment	3,829,080	-	(3,829,080)
1756.5680	AP Process Area Roof/Other	Electrical	-	187,169	187,169
1756.5690	AP Process Area Roof/Other	Instrumentation	-	10,436	10,436
1757.5730	AP Process Area Unit Groups	PAF	-	35,808	35,808
1758.5810	AP Process Area Equip Installation	Mechanical Systems	12,540,902	11,156,856	(1,384,046)
1758.5850	AP Process Area Equip Installation	Chemical Systems	2,438,555	7,082,040	4,643,485
1761.6100	S&R Area Level 1	Building Structure	18,229,486	21,483,846	3,254,360
1761.6110	S&R Area Level 1	Architectural Features	2,028,305	4,960,379	2,932,074

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Cost Account	Functional Area Descriptions	Cost Account Description	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1761.6120	S&R Area Level 1	HVAC	1,435,517	4,364,621	2,929,105
1761.6130	S&R Area Level 1	Shipping and Receiving Area (BSR) – Shipping and Receiving Area – Le	1,605,863	1,443,333	(162,529)
1761.6140	S&R Area Level 1	Utility Equipment & Piping	1,406,932	948,598	(458,335)
1761.6150	S&R Area Level 1	Process Piping	330,741	1,199,682	868,941
1761.6170	S&R Area Level 1	Other Equipment	258,851	358,450	99,599
1761.6180	S&R Area Level 1	Electrical	9,717,335	9,076,335	(641,000)
1761.6190	S&R Area Level 1	Instrumentation	468,092	1,093,509	625,417
1762.6200	S&R Area Level 2	Building Structure	6,002,734	11,030,640	5,027,906
1762.6210	S&R Area Level 2	Architectural Features	35,534	808,993	773,459
1762.6220	S&R Area Level 2	HVAC	2,833,861	7,875,915	5,042,054
1762.6230	S&R Area Level 2	Shipping and Receiving Area (BSR) – Shipping and Receiving Area – Le	1,254,324	1,448,395	194,071
1762.6240	S&R Area Level 2	Utility Equipment & Piping	107,201	20,100	(87,101)
1762.6250	S&R Area Level 2	Process Piping	186,238	311,367	125,129
1762.6270	S&R Area Level 2	Other Equipment	-	34,875	34,875
1762.6280	S&R Area Level 2	Electrical	2,433,971	5,336,801	2,902,830
1762.6290	S&R Area Level 2	Instrumentation	120,382	334,483	214,102
1763.6300	S&R Area Level 3	Building Structure	-	5,600,636	5,600,636
1763.6310	S&R Area Level 3	Architectural Features	477,402	1,669,516	1,192,114
1763.6320	S&R Area Level 3	HVAC	2,563,310	7,568,000	5,004,690
1763.6330	S&R Area Level 3	Shipping and Receiving Area (BSR) – Shipping and Receiving Area – Le	1,755,869	1,659,212	(96,657)
1763.6340	S&R Area Level 3	Utility Equipment & Piping	146,215	58,334	(87,881)
1763.6350	S&R Area Level 3	Process Piping	45,070	863,815	818,745
1763.6370	S&R Area Level 3	Other Equipment	7,331	105,520	98,189
1763.6380	S&R Area Level 3	Electrical	1,079,778	8,730,876	7,651,098
1763.6390	S&R Area Level 3	Instrumentation	1,591,341	1,779,241	187,901
1764.6400	S&R Area Roof/Other	Building Structure	-	3,072,441	3,072,441
1764.6470	S&R Area Roof/Other	Other Equipment	6,602	-	(6,602)
1764.6480	S&R Area Roof/Other	Electrical	-	186,341	186,341
1764.6490	S&R Area Roof/Other	Instrumentation	-	10,457	10,457
1771.7100	Safe Havens (BSH)	Building Structure	7,436,315	8,425,791	989,476
1771.7110	Safe Havens (BSH)	Architectural Features	7,146,295	1,420,056	(5,726,239)
1771.7120	Safe Havens (BSH)	HVAC	927,006	4,359,752	3,432,746
1771.7130	Safe Havens (BSH)	Fire Protection	2,988	-	(2,988)
1771.7140	Safe Havens (BSH)	Utility Equipment & Piping	8,055	35,057	27,002
1771.7170	Safe Havens (BSH)	Other Equipment	328	-	(328)
1771.7180	Safe Havens (BSH)	Electrical	3,131,063	1,682,127	(1,448,936)
1771.7190	Safe Havens (BSH)	Instrumentation	231,865	86,625	(145,240)
1772.7200	Gabion Walls & Fills	Building Structure	25,824,745	39,222,116	13,397,371
1772.7210	Gabion Walls & Fills	Architectural Features	1,068,385	31,026,898	29,958,513
1772.7270	Gabion Walls & Fills	Other Equipment	274,440	113,238	(161,202)
1772.7280	Gabion Walls & Fills	Electrical	1,039,438	1,091,331	51,893
1774.7401	Distributables	Subcontractor Project Management/Project Controls	6,598,306	72,846,805	66,248,499

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Cost Account	Functional Area Descriptions	Cost Account Description	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1774.7402	Distributables	Subcontractor Project Administration/Accounting	-	-	-
1774.7403	Distributables	Subcontractor Quality Assurance / Quality Control	-	-	-
1774.7404	Distributables	Subcontractor Environmental, Safety and Health	-	3	3
1774.7405	Distributables	Subcontractor Home Office Support	-	-	-
1774.7406	Distributables	Subcontractor Mobilization	437,300	859,829	422,528
1774.7407	Distributables	Subcontractor Demobilization	26,800	580,131	553,331
1774.7408	Distributables	Dewatering, Erosion and Sedimentation Control	176,470	176,470	(0)
1774.7409	Distributables	Equipment Rental (Including Vehicles)	2,356,013	20,944,738	18,588,725
1774.7410	Distributables	Miscellaneous Procured Services	225,600	1,447,138	1,221,538
1774.7411	Distributables	Consumables and Expendable Materials	775,267	4,263,877	3,488,610
1774.7412	Distributables	Performance Bond	871,448	1,107,034	235,586
1774.7413	Distributables	Tools	196,633	387,367	190,734
1774.7414	Distributables	Craft Distributable and Indirect Costs	3,766,887	14,124,171	10,357,284
1774.7415	Distributables	Concrete Batch Plant	3,778,207	3,778,185	(22)
1774.7416	Distributables	Independent Test Lab	1,018,992	1,887,424	868,432
1774.7417	Distributables	NDE Testing	874,858	904,226	29,368
1774.7418	Distributables	Craft Support for MFFF Construction	1,445,077	23,870,675	22,425,598
1774.7440	Distributables	Support Building for the Fabrication of Supports on Site Specific to	-	39,366,963	39,366,963
1774.7441	Distributables	BRP Distributables	-	481,143	481,143
1774.7442	Distributables	Craft Labor for Non-Discipline Specific Scope	-	7,070,939	7,070,939
1774.7445	Distributables	Craft Orientation & Training	-	3,113,237	3,113,237
1774.7446	Distributables	MOX Construction Back Charges	-	-	-
1774.7453	Distributables	Craft Orientation & Training	-	125,868	125,868
1774.7454	Distributables	Bulk Procurement - Material	-	253,976	253,976
1774.7455	Distributables	Distributable - Subcontract	-	750,385	750,385
1775.7501	Batch Paint	Batch Plant Capital Cost	-	-	-
1775.7502	Batch Paint	Batch Plant Operations	-	0	0
1775.7503	Batch Paint	Batch Plant Concrete Materials	-	(0)	(0)
Total Installation			\$ 817,738,444	\$ 1,602,357,424	\$ 784,618,980
1774.7419	Distributables	Construction Distributables - Misc	\$ 8,997,911	\$ 44,517,380	\$ 35,519,469
1774.7420	Distributables	Bulk Cable for MFFF Construction	10,123,467	36,510,224	26,386,757
1774.7421	Distributables	Electrical Connectors for MFFF Construction	-	-	-
1774.7422	Distributables	Electric Glove Box Penetrations for MFFF Construction	-	-	-
1774.7424	Distributables	Distributables - Bulk Commodity - HVAC	16,844,578	17,545,355	700,777
1774.7427	Distributables	Rebar MFFF Construction	-	59,420	59,420
1774.7428	Distributables	Civil/Structural Material	12,784,971	44,341,502	31,556,531
1774.7429	Distributables	Distributables - Bulk Commodity - Stainless Steel Ball Valves	17,659,657	17,088,381	(571,276)
1774.7430	Distributables	Distributable - Bulk Commodity Account - Chillers	2,428,798	2,321,091	(107,707)
1774.7431	Distributables	Bulk Commodity - Fans	-	-	-
1774.7432	Distributables	Electrical Material and Other Miscellaneous Labor Acct	15,115,366	81,807,066	66,691,700
1774.7433	Distributables	Instrumentation & Controls Material	97,473,686	73,807,772	(23,665,914)
1774.7434	Distributables	Chemical Equipment	-	9,905,742	9,905,742

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Cost Account	Functional Area Descriptions	Cost Account Description	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1774.7435	Distributables	Distributables - HVAC Equipment	7,046,692	92,131,147	85,084,455
1774.7436	Distributables	Suspense Account - Process Equipment	-	36,697	36,697
1774.7438	Distributables	Mechanical Equipment	54,802,155	143,942,463	89,140,308
1774.7439	Distributables	Consumable & Expendable Materials Specific to CP-27 – BAP Chemical P	1,584,469	37,778,832	36,194,363
Total Materials			\$ 244,861,751	\$ 601,793,073	\$ 356,931,323
Total - Installation and Materials			\$ 1,062,600,195	\$ 2,204,150,497	\$ 1,141,550,303
1000.8037		Mechanical – Construction Support	\$ -	\$ -	\$ -
1003.8032	Site Construction Support	Civil / Structural	3,786,460	21,309,941	17,523,481
1003.8034	Site Construction Support	Electrical / I&C Site Construction Support	9,085,875	26,236,366	17,150,490
1003.8035	Site Construction Support	Chemical-Construction Support	4,589,292	7,654,227	3,064,935
1003.8036	Site Construction Support	Mechanical – Construction Support	1,259,111	5,993,434	4,734,323
1003.8037	Site Construction Support	Plant Configuration Site Construction Support	11,694,072	24,406,806	12,712,734
1003.8038	Site Construction Support	Engineering Mechanics - Site Construction Support	1,100,594	1,889,064	788,470
1004.8040	Procurement & Fabrication Support	Responsible Engineer Process Unit Fabrication Support	-	-	-
1004.8044	Procurement & Fabrication Support	Electrical / I&C Procurement and Fabrication Support	(145,000)	2,589	147,589
1004.8046	Procurement & Fabrication Support	Chemical-Procurement/Fabrication Support	(474,839)	3,032,980	3,507,819
1004.8047	Procurement & Fabrication Support	Mechanical – Procurement/Fabrication Support	324,345	319,072	(5,273)
1005.8052	Start-up & Operations Support	Mechanical – Startup & Operations Support	1,090,249	300,099	(790,150)
1005.8053	Start-up & Operations Support	Electrical / IC Startup and Operations Support	366,145	-	(366,145)
1005.8054	Start-up & Operations Support	Civil/ Structural Startup Support	-	-	-
1005.8057	Start-up & Operations Support	Chemical/Mechanical Engineering Startup Support	272,356	120,575	(151,781)
1007.8071	Engineered Equipment Procurements	Chemical Related Engineered Equipment	-	-	-
1007.8072	Engineered Equipment Procurements	Electrical Related Engineered Equipment	-	-	-
1007.8073	Engineered Equipment Procurements	Instrumentation & Control Related Engineered Equipment	-	-	-
1007.8074	Engineered Equipment Procurements	HVAC Related Engineered Equipment	-	-	-
1007.8075	Engineered Equipment Procurements	Miscellaneous Engineered Equipment	-	-	-
Total Title III Engineering			\$ 32,948,661	\$ 91,265,151	\$ 58,316,491
Total MFFF Construction Change Cost Growth			\$ 1,095,548,855	\$ 2,295,415,649	\$ 1,199,866,793

Sources:

Schedule 1.31

VI. INCENTIVE FEE PAYMENTS

DOE structured Project construction as a cost-reimbursement contract with several different fee elements. Among them the Contract set forth a quarterly schedule of incentive fees that MOX Services would be paid for meeting certain contractual cost and schedule targets.¹ Specifically, to receive the incentive fee each quarter, MOX Services' performance must be within the estimated Cost Incentive Fee Band and Schedule Incentive Fee Band set forth in the Contract.

MOX Services has met these cost and schedule performance targets, and currently is entitled to the entire \$81,990,019 in incentive fee on the Contract. The Fee Bands and incentive fee amounts are shown in the following table:

Chart VI.1, Project Cost and Schedule Incentive Fee Bands

Project / Cost & Schedule Incentive Fee Bands ²										
Incentive Fee Bands										
	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	
Cost in Dollars	200,000,000	200,000,000	200,000,000	200,000,000	200,000,000	150,000,000	100,000,000	50,000,000	0	
Schedule	6 months	6 months	6 months	6 months	6 months	6 months	6 months	3 months	0	
Incentive Fee Amounts by FY (7% Fee Schedule) ³										
	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
Incentive Amount in Dollars	3,000,000	12,000,000	14,100,000	15,400,000	14,500,000	9,500,000	8,490,019	5,000,000	0	81,990,019

Beginning in the first quarter of FY11 (October 2010), NNSA suspended incentive fee payments, contending that MOX Services was outside the Cost Incentive Fee Band.⁴ The

¹ See Contract, Exhibit 7 at J.7.1 (Incentive / Milestone Fee Plan).

² See *id.* at J.7.6 (Project /Cost Incentive Fee Band & Schedule).

³ The Contract rendered the 7% fee schedule contingent on the exercise of Option 2. MOX Services submitted a proposal for Option 2, but NNSA has yet to act on it. MOX Services uses the 7% fee schedule because NNSA has delayed exercise of Option 2 and MOX Services should not be penalized for NNSA's failure to act. MOX Services has submitted a claim to the Civilian Board of Contract Appeals to set the appropriate fee percentage to 7%.

⁴ MOX Services objected to NNSA's actions in a series of correspondence beginning shortly after NNSA began suspending incentive fee payments. See, e.g., Exhibits 112-117 (letter exchanges concerning the suspension of incentive fee payments between Paul

suspension of incentive fee payments, however, did not account for adjustments to the estimated cost of CLIN 002 – the key comparator to EAC for incentive fee entitlement purposes – as documented in this Claim. The incentive fee payments have not been reinstated, and to date, twenty quarterly incentive fee payments improperly remain suspended, for a total of \$52,890,019.

Chart VI.2, Incentive Fee And Interest Owed To MOX Services ⁵

Description	Amount
FY2011 Incentive Fee Payments	\$ 15,400,000
FY2012 Incentive Fee Payments	14,500,000
FY2013 Incentive Fee Payments	9,500,000
FY2014 Incentive Fee Payments	8,490,019
FY2015 Incentive Fee Payments	5,000,000
Total Incentive Fee Payments Outstanding	\$ 52,890,019
Total Interest Due	\$ 3,537,748
Total Incentive Fee Payments with Interest	\$ 56,427,767

A. Overview Of MOX Services' Incentive Fee Entitlement

So long as MOX Services meets schedule requirements, it is entitled to incentive fee payments for every quarter in which the EAC is projected to be below the total estimated cost of CLIN 002, or the "Target Cost," plus the Incentive Fee Band amount.⁶ Stated as a formula:

*If EAC ≤ Estimated Cost of CLIN 2 + Incentive Fee Band,
Then MOX Services is entitled to Incentive Fee.*

Whittingham, MOX Services' Contracts Manager, and Rob Swett, NNSA Contracting Officer, from June 10, 2011 to November 22, 2011).

⁵ Contract, Exhibit 7 at J.7.6, Incentive Fee Amounts by FY (7% Fee Schedule).

⁶ *Id.* at J.7.2 ("The total estimated cost of CLIN 002 is hereafter referred to as the Target Cost.").

MOX Services presently meets the requirements of this formula, and is entitled to the payment of all suspended incentive fees.⁷

1. MOX Services is Within the Incentive Fee Schedule Band

Regarding the Incentive Fee Schedule Band, until the 2012 Rebaseline, DOE restrictions on whether and how MOX Services could perform the process unit scope of work greatly delayed progress on designing and fabricating the equipment. And, as DOE admits, since the 2012 Rebaseline the government's failure to provide a reliable funding profile on which the Project may be planned has defeated MOX Services' ability to prepare a meaningful schedule against which its performance can be measured.⁸ In these government-caused circumstances, MOX Services is entitled to a determination that it has to date satisfied the incentive fee schedule requirements.

2. MOX Services is Within the Cost Incentive Fee Band

Regarding its cost performance, for at least three reasons MOX Services is within the Cost Incentive Fee Band. First, as stated, the government's actions and inactions have caused gross uncertainties regarding funding levels that have defeated the ability to calculate a meaningful EAC. In these circumstances, the EAC should remain fixed as of the 2012 Rebaseline (as amended by the 2012 Rebaseline Addendums), and thus the operative EAC has remained below the estimated cost of CLIN 002.

Second, the contract's incentive fee provision defines "Target Cost" to be the total estimated cost of CLIN 002.⁹ CLIN 002 is the single line item for all of the Option 1 funds to construct the MFFF. The contract does not distinguish the amounts added to CLIN 002 based on whether, for example, the funds are to cover contract changes under the changes clause or to cover cost overruns. In either case, construction funds added to the Contract increase the estimated cost of CLIN 002/Target Cost.¹⁰ Under the incentive fee cost formula,

⁷ See Contract, Exhibit 7 at J.7.2 ("When the target cost and schedule are once again within the Incentive Fee Band, payments of quarterly Incentive Fee will resume. Additionally, all suspended quarterly payments may be invoiced.").

⁸ See Exhibit 118, Letter from Frank G. Klotz, NNSA Administrator, to Hon. John McCain, Chairman, Senate Armed Services Committee, Sept. 14, 2016 (showing a 15-year difference in construction completion between an annual funding level of \$350 million and \$500 million). Although not addressed in detail in this Claim, Mr. Klotz's letter also illustrates how the chronic underfunding of the Project adds tremendously to its estimated cost. The letter estimates that construction will cost almost \$3 billion more at an annual funding level of \$350 million than it will with \$500 million in annual funding.

⁹ Exhibit 1, Section J, Attachment 7, Clause 2.

¹⁰ This simple observation is illustrated by Mod. 234, which increased the estimated cost of CLIN 002 for "overrun"). Exhibit 119. Modification 234 states "The purpose of this modification is to execute a non-fee-bearing funding increase to the estimated price of CLIN

the increases to Target Cost assures that MOX Services will remain within the cost parameters that entitle it to incentive fee. In other words, even if the EAC is not presently ascertainable, the EAC is linked to Target Cost such that as EAC increases so must CLIN 002.¹¹

Contract modifications issued by NNSA suggest that the Agency shares this contractual interpretation, and that it has attempted to undo the clear contract language. On March 4, 2015, NNSA issued unilateral contract Modification 242.¹² This modification added \$120 million to the estimated price of CLIN 002 for what NNSA asserted was “to cover overrun performance.”¹³ NNSA issued another unilateral contract modification, Modification 244, three months later.¹⁴ This modification added another \$80 million to the estimated cost of CLIN 002.¹⁵ In doing so, however, Modification 244 also stated that “for purposes of any Cost/Incentive Fee calculations, CLIN 002 will be adjusted downward to exclude cost increases caused by cost overruns.”¹⁶ The Modification purported to apply this unilateral action to several previous contract modifications, totaling \$540 million, including Modification 242.¹⁷ This improper attempt unilaterally to change these key contract terms demonstrates that NNSA believes that the plain text of the incentive fee clause means that the estimated cost of CLIN 002/Target Cost must be adjusted upwards for all increases in

002, Mixed-Oxide Fuel Fabrication Facility (MFFF), Option 1 of \$140,000,000 (with an associated increase to contract value) to cover overrun performance.”

¹¹ This result makes sense in the context of this enormous and complex first-of-a-kind facility designed to manipulate weapons-grade nuclear material into fuel to be irradiated in commercial nuclear power plants. At the inception of Option 1, the incentive fee equated to only about 2% of the projected cost of CLIN 2. If, as has been the case, costs rose, the incentive fee, as a percentage of construction costs, necessarily would decrease. And, it is inevitable that some costs MOX Services would incur in performing the contract would not be cost-reimbursable, and could be offset by incentive fee. Moreover, the incentive fee provision appears to have been designed to induce the parties to remain current on their contract administration responsibilities. This instrumental effect would encourage timely updates to the EAC, estimated cost of CLIN 002/Target cost, and schedule projections, and thereby enable effective Project management.

¹² Contract DE-AC02-99CH1088, Modification No. 242 (March 4, 2015) (Exhibit 128).

¹³ *Id.* at Sec. 14, p. 2.

¹⁴ Contract DE-AC02-99CH1088, Modification No. 244 (June 26, 2015 (Exhibit 129).

¹⁵ *Id.* at Sec. 14, p. 2.

¹⁶ *Id.*

¹⁷ *Id.*; *id.* at B.3, p. 7 (purporting to unilaterally change the Cost/Incentive Fee clauses at B.3 and Attachment J.7 artificially to downwardly adjust CLIN 002 for incentive fee determination purposes, for any cost increases NNSA deemed to be cost overruns).

MFFF construction costs. Plain text controls. *McAbee Constr. Inc. v. United States*, 97 F.3d 1431, 1434 (Fed. Cir. 1996).

Third, as set forth in the various sections of this Claim, changes under the Contract's changes clause entitle MOX Services to adjustments in the estimated cost of CLIN 002. The proper adjustments for these changes place MOX Services squarely within the cost performance range that entitles it to payment of the suspended incentive fee payments.

B. The 2012 Rebaseline Reset the EAC To Match The Target Cost, Entitling MOX Services To Accrued Incentive Fee

In 2012, MOX Services, in collaboration with NNSA, undertook to reset the Project baseline. This process included MOX Services' submission of multiple iterations of Baseline Change Proposal 12-121 for NNSA review, and it culminated in the October 2012 MOX Project Rebaseline.¹⁸ At that time, MOX Services requested, and NNSA confirmed, that BCP 12-121 would constitute MOX Services' 2012 EAC submission.¹⁹ Later, NNSA directed that MOX Services begin reporting its costs and schedule data against the revised baseline.²⁰

As of October 2012, then, the estimated cost of CLIN 002 was known and should have been increased consistent with the then-current EAC (the 2012 Rebaseline). That is, the estimated cost of CLIN 002 should have been set at the Project EAC plus any remaining Management Reserve, or \$6,352,406,548, through the normal contract administration process.²¹ Thus, as of the 2012 Rebaseline the EAC was below the combined estimated cost of CLIN 002 and the Incentive Fee Band, and, accordingly, MOX Services was eligible to receive all suspended incentive fee payments that had accrued to that date.²²

C. MOX Services Is Within The Cost Incentive Fee Band, Because Target Cost Increases As Projected MFFF Construction Costs Rise

As the MFFF construction costs are funded through CLIN 002, by definition and for all practical purposes the Project's Estimated Cost of CLIN 002/Target Cost and the EAC for Option 1 construction are tethered. The EAC presently cannot be calculated, however. Shortly after the 2012 Rebaseline, in April 2013, NNSA reduced planned funding of the

¹⁸ See, e.g., Exhibit 120, BCP 12-121 Rev. 1 (Sept. 28, 2012).

¹⁹ Letter DCS-DOE-004151 from Kelly Trice, President and COO, MOX Services, to Robert Swett, Contracting Officer, NNSA (July 3, 2012) ("Exhibit 121"); Letter COR-SRSOCABM-7.09.2012-450852 (July 9, 2012) ("Exhibit 122").

²⁰ Sept. 24, 2012 Letter, Exhibit 11.

²¹ See Exhibit 10, 2012 Rebaseline, at p. 6.

²² See Exhibit 1 at J.7.2 (stating that incentive fee payments, including suspended payments, will resume when MOX Services once again meets the criteria for incentive fees).

Project, and since then NNSA has never provided a full funding profile through Project completion. As DOE repeatedly has found, these actions have defeated MOX Services' ability to determine the Project's EAC,²³ and thus have obscured part of the incentive fee formula.²⁴

Whether the EAC is considered to be fixed at the 2012 Rebaseline with Addendum level or is conceptualized as moving in tandem with estimated construction costs based on appropriate assumptions for calculating the EAC is of no moment. In either case the EAC has remained below the sum of the Target Cost and the Cost Incentive Fee Band. Accordingly, MOX Services meets the cost requirements to be entitled to the scheduled quarterly incentive fee payments.

Alternatively, as of the 2012 Rebaseline MOX Services was entitled to an adjustment in the estimated value of CLIN 002/Target Cost reflecting the Contract changes and out-of-scope work documented in this Claim. When adjustments are made to the estimated cost of CLIN 002 for the changes presented in this Claim, the Project EAC (the 2012 Rebaseline with Addendum) is less than the Target Cost plus the Cost Incentive Fee Band. Thus, as of the 2012 Rebaseline the MOX Project was within the Cost Incentive Fee Band, and MOX Services' cost performance has remained in this state.²⁵ As seen below, as amended the 2012 Rebaseline EAC value of \$6,327,061,370 is less than a properly adjusted CLIN 002 value of \$6,390,336,694 plus the Incentive Fee Band of \$200,000,000, which equates to a Maximum Fee Ceiling of \$6,590,336,694.²⁶

²³ Exhibit 123, U.S. Department of Energy, 2016 Updated Performance Baseline for the Mixed Oxide Fuel Fabrication Facility at the Savannah River Site, at 19 (citing an earlier DOE report and concluding, "The 2016 updated PB estimating team again agrees with the Red Team that 'a true ETC cannot be developed and authenticated until it can be based on a sound schedule that in turn is based on firm funding level commitments at a realistic, affordable, and sustained level through project completion'").

²⁴ Funding reductions and uncertainties have disrupted the Project. NNSA also disrupted the project by making public statements announcing an intention to place the MOX Project into cold standby, even though doing so would have violated several laws. NNSA's statements were extremely disruptive to MOX Services' operations, and increased the schedule and costs. In response, MOX Services was forced to take remedial measures to retain as much of its workforce as possible, and to recruit new personnel to backfill for those who left the Project amid the uncertainty.

²⁵ Since the 2012 Rebaseline, MOX Services has from time-to-time provided updated EACS to NNSA, as directed by the Agency. Because such EACs have not had the benefit of firm funding commitments to MFFF construction completion, however, these EACs do not provide reliable markers against which MOX Services performance accurately may be measured.

²⁶ It does not matter whether one uses the \$200 million Incentive Fee Band in effect when NNSA suspended the payment of incentive fees in October 2010 or the \$150 million

**Chart VI.3, CLIN 002 With Claim Adjustments, And Compared To
Cost Incentive Fee Ceiling²⁷**

	Description	Amount
<i>a</i>	October 31, 2012 Contract Proposal Value (Without Fee)	\$ 6,352,406,548
<i>b</i>	Less: MR included in October 31, 2012 EAC	\$ (311,261,846)
<i>c</i>	Plus: 2012 Rebaseline Addendum	\$ 285,916,668
<i>d = a+b+c</i>	Adjusted October 31, 2012 Contract Proposed EAC	\$ 6,327,061,370
<i>e</i>	Then Current CLIN 0002 Contract Value (Mod 205, June 2012)	\$ 3,925,846,423
<i>f</i>	Add: Total Claim for Changes	2,464,490,271
<i>g = e+f</i>	Estimated Cost of CLIN 0002	\$ 6,390,336,694
<i>h</i>	Add: Incentive Fee Band	\$ 200,000,000
<i>i = g+h</i>	Max Incentive Fee Ceiling	\$ 6,590,336,694
<i>j = d - i</i>	Amount Above/(Below) Ceiling	\$ (263,275,324)

As shown, no proper EAC currently exists and no proper adjustment or comparison to Target Cost can now be made. Thus, for purposes of the incentive fee calculation, the estimated value of CLIN 002 and the EAC remain as calculated in the chart above. In the alternative, both the EAC and the estimated value of CLIN 002 are increasing at the same rate. In either event, MOX Services is entitled to bill for incentive fee payments under the current Contract terms based on the Contract's Cost Incentive Fee Band.

D. MFFF Construction Is Within The Schedule Incentive Fee Band

MOX Services meets the incentive fee schedule requirements so long as the projected schedule does not exceed the date listed in clause F.1 by more than the time provided in the Incentive Fee Band.²⁸ As of the 2012 Rebaseline, MOX Services was within the Schedule Incentive Fee Band, and currently is within this Band, as properly adjusted as described in this Claim.

Incentive Fee Band in effect at the time of the 2012 Rebaseline. Indeed, with the Target Cost \$263 million below the incentive fee cost parameter, MOX Services would be entitled to the fee without any Incentive Fee Band at all.

²⁷ This chart with references to supporting schedules is appended at Schedule 6.8.

²⁸ Contract, Exhibit 1 at J.7.2 ("If the projected schedule exceeds the date listed [in] clause F.1, but by no more than the additional time provided in the Incentive Fee Band, then the Government will consider the Contractor to be within schedule.").

As discussed more fully in the “Process Unit Changes” section of this Claim, under the changes clause, the clause F.1 construction completion date is subject to adjustment.²⁹ Throughout the period between the 2007 Baseline and the 2012 Rebaseline, the Project’s critical path was controlled by the process unit design, manufacture, and installation.³⁰ Elsewhere in this Claim MOX Services demonstrates that government restrictions on the activities MOX Services was allowed to pursue in furtherance of the process unit construction greatly extended the schedule.

Specifically, due to concerns about maintaining parallelism with Russia’s progress on meeting the requirements of the PMDA, for years NNSA prohibited MOX Services from performing process unit pilot procurements. The schedule estimates MOX Services used necessarily were based on a more speculative, assumption-rich methodology. When such pilots finally were conducted, the results showed that the schedule estimates for the process units fell significantly short of the time that actually would be needed to design and fabricate the process units.

Additionally and alternatively, in an observation that is supported by an independent NNSA-commissioned Root Cause Analysis, NNSA directed MOX Services to prepare schedule estimates at a time when the MFFF designs were insufficiently mature to support this activity. The level of design maturity at the time of NNSA’s direction did not even meet the then-applicable DOE criteria for preparing these critical estimates, and since then DOE has made its design maturity criteria for estimating costs and schedule on complex, large-scale construction projects even more stringent.

Shortly after the 2012 Rebaseline NNSA reduced the Project’s funding and failed to provide a new funding profile, actions which defeated MOX Services’ ability to establish a schedule against which its progress may be measured.³¹ MOX Services cannot rightly be denied incentive fee due to government-caused circumstances.

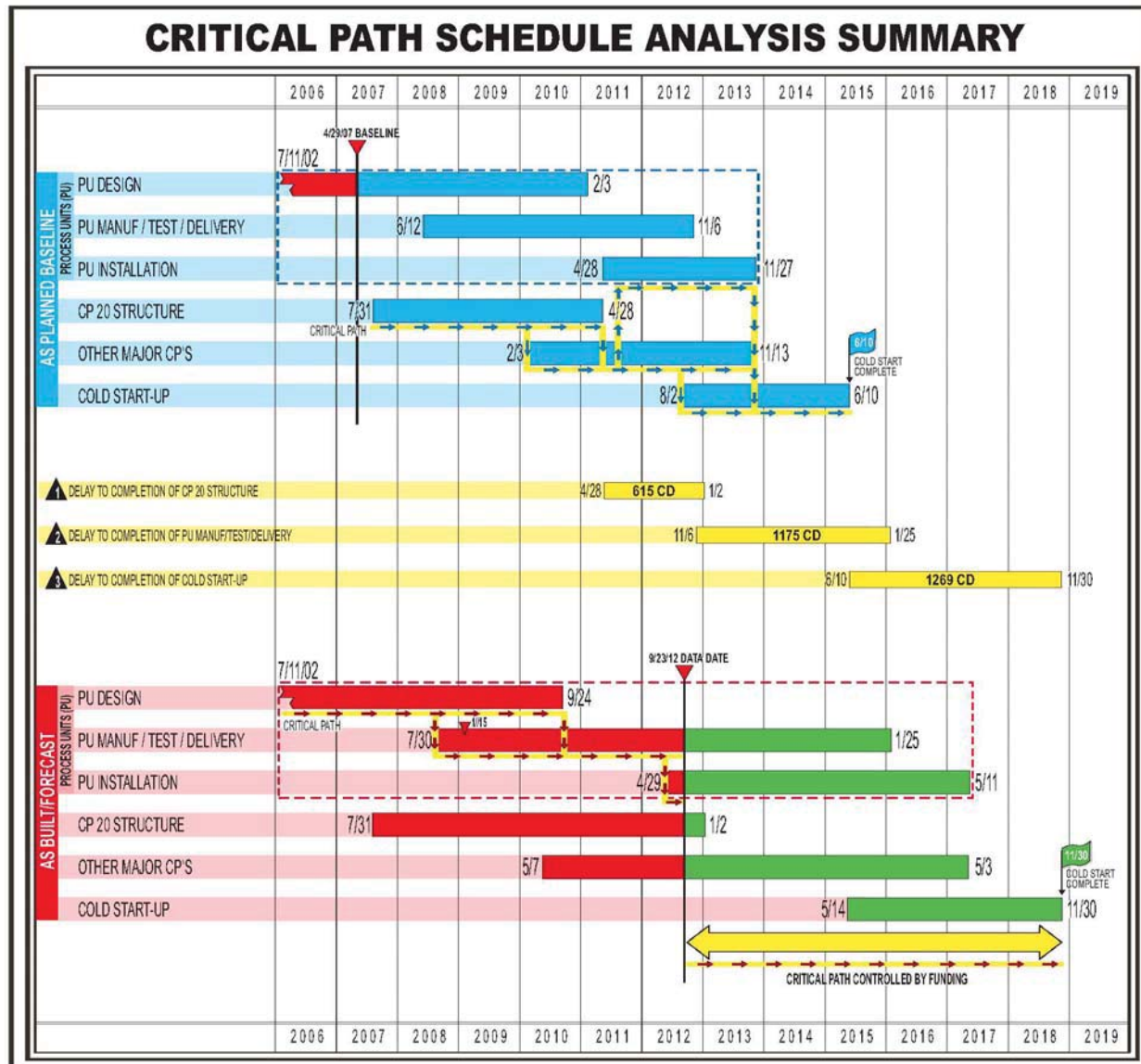
²⁹ Contract, Exhibit 1 at B.3, J.7.2; FAR 52.243-2 (calling for an adjustment in all “affected terms” when a change increases the estimated cost or time required to perform the contract); *see also* FAR 52.216-10(d) (providing for equitable adjustment of incentive fee); *Northrop Grumman Corp. v. United States*, 41 Fed. Cl. 645, 647 (1998) (citing FAR 52.216-10(d) to explain that an equitable adjustment of the incentive fee is articulated as an adjustment “in the target cost, target fee, minimum fee, and maximum fee, as appropriate.”).

³⁰ Some MOX Services Monthly Reports up to the middle of 2008 stated that construction of the MFFF building was the critical path item. Even if, contrary to MOX Services more recent and fulsome analysis, this were so, it would not matter. If necessary, the “Change in Method of Construction Performance” portion of this Claim would operate to extend the schedule for those months for the purpose of determining incentive fee entitlement.

³¹ *See, e.g.*, MFFF Trend 16-1700 (May 24, 2016) (Exhibit 124) (indicating that since the 2012 Rebaseline every year actual MFFF construction funding has fallen far short of the

The following critical path summary chart³² demonstrates that the process unit delays and funding deficiencies and uncertainties have ultimately delayed the Project.

Chart VI.4, MFFF Construction Critical Path



A full funding profile to completion is a necessary condition for determining the Project schedule. Until the government provides such funding certainty the schedule must be extended for incentive fee entitlement purposes on a day-for-day basis.

funding profile NNSA provide MOX Services in September 2012, including a nearly \$300 million funding shortfall in FY2015).

³² Chart IX.4, Critical Path Schedule Analysis Summary, does not include contingency, and thus shows the revised baseline schedule without contingency of November 2018.

Like the government-imposed restrictions on MOX Services' performance of the process-unit work are compensable changes, so too do the funding shortfalls and reductions discussed here constitute changes under the changes clause.³³ For example, a change in funding impacts the schedule and costs associated with the project at issue, forcing the contractor to re-prioritize, cancel or delay construction activities, shift or delay procurements, accelerate activities, freeze hiring and eliminate overtime, and delay material and equipment deliveries.³⁴ And indeed, NNSA has recognized such changes on this contract.³⁵

Moreover, NNSA explicitly accepted the risk associated with funding changes to the project.³⁶ Specifically, the Project Execution Plan, which is incorporated into the Contract, states:

[the risk of funding changes] are very difficult or impossible to quantify, but could have major impacts on TPC if realized. Rather than include the costs to manage these risks in the baseline, NNSA will accept these risks and process a change to the project baseline should they occur.³⁷

Thus, risks associated with funding changes were expressly excluded from the scope of the MFFF Project, and the parties agreed that if such risks materialized, DOE would process changes to costs, schedule, or both to cover the new scope occasioned by such risks.

Here, the presence of an agreed and reliable funding profile through Project completion was a basic premise of the Contract. NNSA's consistent inability to provide MOX Services with reliable out-year funding levels has prevented MOX Services from

³³ See *Bryant and Bryant*, ASBCA No. 27910, May 31, 1988, 88-3 BCA ¶ 20,923 (allowing recovery under Changes clause where budget changes rendered some of appellant's work useless and caused appellant to expend additional effort).

³⁴ See, e.g., DOE Cost Estimating Guide, Exhibit 63 at 10 ("Timing changes of actual funding versus planned budgets may not change the technical scope for which an estimate has been developed. However, those timing changes (extending work into the future from planned schedules) can cause changes to programmatic scope, project duration, and efficiencies, which affect overall project costs (such changes are subject to change control – scope, schedule and cost)."); Contract, Exhibit 1 at B.4(a)(iii)(C); PEP, Exhibit 17 at 28 ("[Funding changes] are very difficult or impossible to quantify, but could have major impacts on TPC if realized."); Option I Proposal, at I (Cost).; Letter DCS-DOE-004393 from Kelly Trice, President and CEO, Shaw AREVA MOX Services, LLC to Scott Cannon, Federal Project Director, DOE at 2 (June 6, 2013) ("June 6 Letter"). ("Exhibit 125").

³⁵ See Contract DE-AC02-99CH1088, Modification No. 134 (Apr. 30, 2009) ("Mod 134") at 2. ("Exhibit 126").

³⁶ See PEP, Exhibit 17 at 28. Additionally, Risk Event #105 of the TPRA, which was related to insufficient funding, was a risk accepted by DOE.

³⁷ PEP, Exhibit 17 at 28 (emphasis added).

determining the completion of construction, efficiently sequencing work, conducting critical path analyses, and other vital schedule-related tasks.

Additionally, when at the start of FY12 MOX Services had planned to ramp up its craft labor activity, the government actually *reduced* contract funding.³⁸ NNSA never thereafter provided the funds needed to support the planned systems work in FY13 and FY14. This forced MOX Services to decrease its construction and procurement activities, further delaying construction completion.³⁹

In sum, funding reductions and uncertainty obscure the total schedule impact from the contract changes discussed in this Claim. A schedule cannot be developed to Project completion and Project completion is being delayed each day the funding issues are not resolved. Thus, MOX Services is entitled to an extension of the F.1 date for the period of time the Project remains without an adequate funding profile, and, accordingly, MOX Services is within the Incentive Fee Schedule Band.

* * * * *

With the adjustments in the estimated cost of CLIN 002/Target Cost and the schedule completion date discussed above, the Project falls within both incentive fee bands. As such, MOX Services is entitled to receive the previously-suspended incentive fee payments, totaling \$52,890,019.

³⁸ See 2007 Project Baseline Plan, Exhibit 127 at 4.

³⁹ June 29 Letter, Exhibit 9.

CB&I AREVA MOX Services, LLC.

Schedule 6.0

Claim Summary

	Increased Incentive Fee Cost Target
Scope Changes	
Process Unit Scope Change	\$ 1,324,966,109
Construction Strategy Change	258,614,864
MFFF Construction Change	1,198,566,862
Subtotal Scope Changes	\$ 2,782,147,835
Removal of Non-Claim Items	\$ (317,657,564) ⁽¹⁾
Total Scope Changes	\$ 2,464,490,271

Sources:

Schedule 6.01

Notes:

(1) Adjustment includes costs for the following items:

Unclaimed Cost Growth - \$74.2M

Contract Modifications Already Included - \$108.7M

Pre-2007 EAC Baseline Adjustment - \$134.9M

CB&I AREVA MOX Services, LLC.
Total Claim For Changes Detail

Schedule 6.01

	[A]	[B]	
Claim Category	Cost Growth	Increased Incentive Fee Cost Target	Support Schedules
Option 1 Contract			
Process Units Scope Change	\$ 1,367,192,210	\$ 1,324,966,109	Schedule 6.1
Construction Strategy Change	258,614,864	258,614,864	Schedule 6.1
MFFF Construction Change	1,199,866,793	1,198,566,862	Schedule 6.1
All Other	(40,744,966)	-	Schedule 6.1
Option 1 Total	\$ 2,784,928,901	\$ 2,782,147,835	
Base Contract	\$ 178,683,926	-	Schedule 6.1
MFFF Project Total	\$ 2,963,612,827	\$ 2,782,147,835	
<u>Cost Adjustments</u>			
Unclaimed Cost Growth		\$ (74,150,096)	Schedule 6.3
Contract Modifications Already Included		(108,653,274)	Schedule 6.4
Pre-2007 EAC Baseline Adjustment		(134,854,194)	Schedule 6.5
Total Cost Adjustments		\$ (317,657,564)	
Total Claim For Changes		\$ 2,464,490,271	

CB&I AREVA MOX Services, LLC.
Claim Cost Growth Summary

Schedule 6.1

	[A]	[B]	[C] = B - A	[D]	
Claim Category	2007 Baseline	2012 Rebaseline with Addendum	Cost Growth	Claim Growth	Support Schedule
Option 1 Contract					
Process Units Scope Change	\$ 1,150,921,514	\$ 2,518,113,724	\$ 1,367,192,210	\$ 1,324,966,109	Schedule 6.2
Construction Strategy Change	78,174,343	336,789,207	258,614,864	258,614,864	Schedule 6.2
MFFF Construction Change	1,095,548,855	2,295,415,649	1,199,866,793	1,198,566,862	Schedule 6.2
All Other	454,177,767	413,432,801	(40,744,966)	-	Schedule 6.2
Option 1 Total	\$ 2,778,822,480	\$ 5,563,751,381	\$ 2,784,928,901	\$ 2,782,147,835	
Base Contract	\$ 872,066,279	\$ 1,050,750,205	\$ 178,683,926	\$ -	Schedule 6.2
MFFF Project Total	\$ 3,650,888,759	\$ 6,614,501,586	\$ 2,963,612,827	\$ 2,782,147,835	

CB&I AREVA MOX Services, LLC.

Schedule 6.2

Claim Cost Growth Detail

	[A]	[B]	[C] = B-A	[D]	
Claim Category	2007 Baseline	2012 Rebaseline with Addendum	Cost Growth	Claim Growth	Supporting Schedule
Option 1 Contract					
Process Units Scope Change					
Direct Process Unit	\$ 345,543,884	\$ 858,791,412	\$ 513,247,529	\$ 502,803,979	Schedule 3.02
Hotel Load	799,014,425	1,612,646,690	813,632,265	781,849,714	Schedule 3.02
QA - Process Units/Hotel Load	6,363,205	46,675,622	40,312,416	40,312,416	Schedule 3.02
Process Units Subtotal	\$ 1,150,921,514	\$ 2,518,113,724	\$ 1,367,192,210	\$ 1,324,966,109	
Construction Strategy Change					
QA - Construction	\$ 16,659,849	\$ 122,203,946	105,544,098	105,544,098	Schedule 4.01
Construction Management	61,514,495	214,585,261	153,070,766	153,070,766	Schedule 4.01
Construction Subtotal	\$ 78,174,343	\$ 336,789,207	\$ 258,614,864	\$ 258,614,864	
MFFF Construction Change					
Installation	\$ 817,738,444	\$ 1,602,357,424	\$ 784,618,980	\$ 783,349,619	Schedule 5.01
Materials	244,861,751	601,793,073	\$ 356,931,323	356,920,702	Schedule 5.01
MFFF Construction Title III Engineering	32,948,661	91,265,151	\$ 58,316,491	58,296,541	Schedule 5.01
MFFF Construction Subtotal	\$ 1,095,548,855	\$ 2,295,415,649	\$ 1,199,866,793	\$ 1,198,566,862	
All Other ⁽¹⁾	454,177,767	413,432,801	(40,744,966)	-	Schedule 1.2
Option 1 Contract Subtotal	\$ 2,778,822,480	\$ 5,563,751,381	\$ 2,784,928,901	\$ 2,782,147,835	
Base Contract	\$ 872,066,279	\$ 1,050,750,205	\$ 178,683,926	\$ -	Schedule 1.2
MFFF Project Total	\$ 3,650,888,759	\$ 6,614,501,586	\$ 2,963,612,827	\$ 2,782,147,835	

Sources:

[A] May 2007 PRISM Data adjusted for budget transfers between July 2007 and September 2012

[B] 2012 contract proposal value as stated in December 2012 PRISM data and adjusted for 2012 Rebaseline Addendums

[C] Calculated

CB&I AREVA MOX Services, LLC.
Claim Cost Growth Detail

Schedule 6.2

[D] Support schedules

Notes:

(1) Option 1 cost accounts which are not categorized as Process Unit, Construction, or MFFF Construction related.

CB&I AREVA MOX Services, LLC.

Schedule 6.21

Overall Cost Variance

By Management Area

		[A]	[B]	[C] = B - A	[D]
Management Area	MA Description	2007 Baseline	2012 Rebaseline with Addendum	Cost Growth	Claim Growth
Option 1 Analyzed					
6	Project Management	\$ 210,374,596	\$ 604,093,287	\$ 393,718,692	\$ 391,960,308
10	Title III Engineering	179,644,130	462,555,733	282,911,603	283,407,296
15	Construction Management	61,514,495	214,585,261	153,070,766	153,070,766
16	Process Unit Assembly	52,063,827	76,371,508	24,307,681	23,732,426
17	Permanent Facility & Infrastructure	1,328,934,157	2,902,768,004	1,573,833,847	1,562,685,571
18	Temporary Facilities & Services	67,767,805	198,269,948	130,502,143	128,580,531
19	Quality Assurance/Quality Control	23,023,054	168,879,568	145,856,514	145,856,514
20	Cold Startup	155,716,219	217,048,349	61,332,130	63,901,948
22	ES&H Program Management	27,395,271	54,659,996	27,264,725	28,952,476
	Subtotal	\$ 2,106,433,553	\$ 4,899,231,653	\$ 2,792,798,099	\$ 2,782,147,835
Option 1 Not Analyzed					
11	Regulatory Affairs	\$ 166,950,027	\$ 156,495,942	\$ (10,454,084)	\$ -
21	(OPC) Operations Preparation	240,996,730	270,819,345	29,822,615	-
90	DOE/SRNS Costs	264,442,170	237,204,441	(27,237,729)	-
	Subtotal	\$ 672,388,927	\$ 664,519,728	\$ (7,869,198)	\$ -
	Total Option 1	\$ 2,778,822,480	\$ 5,563,751,381	\$ 2,784,928,901	\$ 2,782,147,835
Base Contract					
1	MFFF Design	\$ 429,487,860	\$ 494,922,248	\$ 65,434,387	\$ -
6	Project Management	88,291,653	88,638,735	347,082	-
12	Procurement Engineering	92,302,157	139,605,065	47,302,909	-
13	Manufacturing Design	163,465,978	182,862,060	19,396,082	-
14	Software Design	98,518,631	144,722,097	46,203,466	-

CB&I AREVA MOX Services, LLC.

Schedule 6.21

Overall Cost Variance

By Management Area

Management Area	MA Description	[A]	[B]	[C] = B - A	[D]
		2007 Baseline	2012 Rebaseline with Addendum	Cost Growth	Claim Growth
	Total Base Contract	\$ 872,066,279	\$ 1,050,750,205	\$ 178,683,926	\$ -
	Grand Total	\$ 3,650,888,759	\$ 6,614,501,585	\$ 2,963,612,827	\$ 2,782,147,835

Sources:

[A] May 2007 PRISM Data adjusted for budget transfers between July 2007 and September 2012

[B] 2012 contract proposal value as stated in December 2012 PRISM data and adjusted for 2012 Rebaseline Addendums

[C] Calculated

[D] Schedule 6.22

CB&I AREVA MOX Services, LLC.
Claim Growth by Management Area

Schedule 6.22

		[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I] = A + B...+I
		Process Units Scope Change		Construction Strategy Change		MFFF Construction Change				
Management Area	MA Description	Process Units ⁽¹⁾	Hotel Load ⁽¹⁾	Quality Assurance	Quality Assurance	Construction Management	Installation	Materials	Title III Engineering	Total Claim Growth
Option 1 Analyzed										
6	Project Management		\$ 391,960,308							\$ 391,960,308
10	Title III Engineering	\$ 56,656,303	168,454,452						\$ 58,296,541	283,407,296
15	Construction Management					\$ 153,070,766				153,070,766
16	Process Unit Assembly	23,732,426								23,732,426
17	Permanent Facility & Infrastructure	422,415,250					\$ 783,349,619	\$ 356,920,702		1,562,685,571
18	Temporary Facilities & Services		128,580,531							128,580,531
19	Quality Assurance/Quality Control			\$ 40,312,416	\$ 105,544,098					145,856,514
20	Cold Startup		63,901,948							63,901,948
22	ES&H Program Management		28,952,476							28,952,476
Total		\$ 502,803,979	\$ 781,849,714	\$ 40,312,416	\$ 105,544,098	\$ 153,070,766	\$ 783,349,619	\$ 356,920,702	\$ 58,296,541	\$ 2,782,147,835

Sources:

[A] Schedules 3.1 - 3.3 Series

[B] Schedule 3.4 Series

[C,D] Schedule 4.1 Series

[E] Schedule 4.2

[F,G,H] Schedule 5.01

Notes:

(1) These exclude Non-DCS costs by Management Area

CB&I AREVA MOX Services, LLC.
Unclaimed Cost Growth Cost Summary

Schedule 6.3

PCN 08-0211 (Process Unit Omitted Scope) Cost Summary⁽¹⁾

Account	[A] Change Log Total Cost	[B] 2007 Baseline	[C] 2012 Rebaseline with Addendum	[D] = C - B Cost Growth	Cost Adjustment
1708.875102.00000	\$ 219,416	\$ 2,885,451	\$ 5,114,003	\$ 2,228,552	
1709.876002.00000	4,580,272	4,908,957	6,695,721	1,786,764	
1709.876102.00000	1,818,693	902,886	2,574,199	1,671,313	
1709.876202.00000	5,979,244	3,842,794	8,777,184	4,934,390	
1709.876302.00000	6,177,077	4,736,568	12,537,135	7,800,567	
1709.876502.00000	4,808,256	1,636,981	3,731,677	2,094,696	
1710.876602.00000	6,972,663	2,888,271	12,167,729	9,279,458	
1710.876702.00000	6,972,663	2,923,928	12,142,482	9,218,554	
1710.876802.00000	6,972,663	2,935,212	2,272,489	(662,723)	
PCN 08-0211 Subtotal	\$ 44,500,947	\$ 27,661,048	\$ 66,012,617	\$ 38,351,569	\$ 38,351,569

REA 11-027 (Engineering Cost)⁽²⁾**\$ 35,798,527****Total****\$ 74,150,096****Sources:**

[A] PCN 08-0211 and September 2012 Contract Budget Log

[B] May 2007 PRISM data adjusted for budget transfers between July 2007 and September 2012.

[C] Schedule 6.31

[D] Calculated

CB&I AREVA MOX Services, LLC.
Unclaimed Cost Growth Cost Summary

Schedule 6.3

Notes:

(1) The 2007 Baseline inadvertently omitted scope related to portions of selected Process Units. PCN 08-0211 initially identified \$44,500,947 in estimated costs associated with this omitted scope of work in nine specific cost accounts. However, the PCN overestimated the cost. As of the 2012 Rebaseline with Addendum, these cost accounts only had a total of \$38,351,569 in cost growth - reflecting lower amounts for the omitted scope. For purposes of this claim, MOX Services is not claiming the \$38,351,569 of cost growth.

(2) On January 31, 2012 MOX Services issued REA 11-027 for the Impact of Nuclear Renaissance on Engineering, Project Services, and Business Services. As part of this claim, MOX Services applied a \$35,798,527 deduction to the analyzed engineering cost accounts for contractor responsible inefficiencies. For purposes of this claim, MOX Services is not claiming cost growth on the \$35,798,527 identified in REA 11-027.

CB&I AREVA MOX Services, LLC.

Schedule 6.31

PCN 08-0211 Accounts 2012 Rebaseline with Addendum Costs

Account	[A] 2012 Rebaseline	[B] 2012 Rebaseline Addendum (Trend EAC 12-0775A)	[C] = A + B 2012 Rebaseline with Addendum
1708.875102.00000	\$ 3,522,154	\$ 1,591,849	\$ 5,114,003
1709.876002.00000	5,799,589	896,132	6,695,721
1709.876102.00000	2,362,821	211,378	2,574,199
1709.876202.00000	7,482,232	1,294,953	8,777,184
1709.876302.00000	9,968,696	2,568,439	12,537,135
1709.876502.00000	4,061,555	(329,878)	3,731,677
1710.876602.00000	11,388,079	779,650	12,167,729
1710.876702.00000	11,337,042	805,439	12,142,482
1710.876802.00000	2,273,321	(832)	2,272,489
Total Accounts included in PCN 08-0211	\$ 58,195,488	\$ 7,817,130	\$ 66,012,617

Sources:

[A] 2012 contract proposal value as stated in December 2012 PRISM data and adjusted for 2012 Rebaseline Addendums

[B] Schedule 6.32

[C] Calculated

CB&I AREVA MOX Services, LLC.
Addendum Trend EAC 12-0775 Costs by Account

Schedule 6.32

		[A]	
		2012 Rebaseline	
		Addendum (Trend	
		EAC 12-0775A)	
Account			
1708.875102.00000		\$	1,591,849
1709.876002.00000			896,132
1709.876102.00000			211,378
1709.876202.00000			1,294,953
1709.876302.00000			2,568,439
1709.876502.00000			(329,878)
1710.876602.00000			779,650
1710.876702.00000			805,439
1710.876802.00000			(832)
Total Accounts in PCN 08-0211		\$	7,817,130
Total All Other Accounts		\$	39,822,056
Total EAC 12 12-0775A		\$	47,639,186

Sources:

[A] Change Log by Workpackage (December 2012 through June 2014)

CB&I AREVA MOX Services, LLC.
 Summary of Contract Modifications Already Included
 CLIN 0002, Option 1 ⁽¹⁾

Schedule 6.4

<u>Date</u>	<u>Mod No.</u>	<u>Mod Description</u>	<u>Total Cost Changes⁽²⁾</u>
Contract Modifications with Release Language			
7/23/2009	Mod 138	REA-09-001, LSR Unit Isotopic Composition Analysis (MC-ICP-MS vs TIMS); allow AREVA NP - Lynchburg fee	\$ 281,426
12/21/2009	Mod 148	REA 08-007, Training Simulator	10,176,123
3/1/2010	Mod 151	REA 09-010, Monitoring and Inspection Regime; administrative corrections & edits	175,576
4/12/2010	Mod 152	REA 10-001, Safety Recognition Incentive Program; REA 10-002 Metal Impurities; REA 10-006 MAC Extension Videoconferencing Equipment; edit, add clauses, SOW	980,002
4/30/2010	Mod 154	REA 10-009, GME Glovebox	587,845
5/19/2010	Mod 156	REA 09-016/BCP 09-020, Manilab Robot Replacement for KPG Glovebox	279,779
6/16/2010	Mod 157	REA 10-010/BCP 10-039, NRC Meeting Support, MA2 and MA4; REA 09-017/BCP 09-021, MDG Barcode Readers Replacement	419,743
10/5/2010	Mod 163	REA 10-014, BAD Renovations	44,010
12/15/2010	Mod 169	REA 09-002 DOE O 551.1C Foreign Travel	68,572
2/7/2011	Mod 171	REA 10-023, Purchase Analyzers; Admin changes	132,816
7/14/2011	Mod 180	Definitize Contract Modification 168 to authorize an equitable adjustment for REA 10-003A; update Attachment 3 to the incentive/Milestone Fee Plan	19,310,033
10/14/2011	Mod 185	Authorize an equitable adjustment for REA 11-010, REA 11-019 and Proposal 11-002	3,214,896

CB&I AREVA MOX Services, LLC.

Schedule 6.4

Summary of Contract Modifications Already Included

CLIN 0002, Option 1 ⁽¹⁾

<u>Date</u>	<u>Mod No.</u>	<u>Mod Description</u>	<u>Total Cost Changes⁽²⁾</u>
11/1/2011	Mod 188	Correct errors in Modification 185	(2,336,449)
1/17/2012	Mod 195	Authorize an equitable adjustment to contract modification 162, REA 10-018 and Proposal 11-001; Incorporate revised tables into Section H.1, Government Furnished Property	4,766,108
4/19/2012	Mod 201	Authorize equitable adjustment for REA 11-009 and Proposal 12-001; Add incremental funding; Incorporate changes to the list of Applicable Directives	835,668
6/20/2012	Mod 203	Definitize Modification 198 with an equitable adjustment for Proposal 12-002; Move \$1,800,000 from CLIN 0001 Base Contract to CLIN 0002 Option 1	5,157,832
6/27/2012	Mod 205	Authorize an equitable adjustment for REA 12-006 and to add \$10,000 incremental funding for CLIN 0005 Other Activities	6,790,616
Subtotal			\$ 50,884,596 ⁽³⁾

Contract Modifications that have Cost Overlap with Claim⁽⁴⁾

2/26/2009	Mod 130	REA 08-003, Upsized Administration Building	\$ 288,000
4/30/2009	Mod 134	REA 08-005, FY08 Funding Reductions, Mod 132 omission	8,871,125
6/24/2009	Mod 137	REA 09-006, Impact of Tritium presence in PUO2 Feed; Implementation of DOE O 450.1A, Environmental Protection Program	683,695

CB&I AREVA MOX Services, LLC.
Summary of Contract Modifications Already Included
CLIN 0002, Option 1 ⁽¹⁾

Date	Mod No.	Mod Description	Total Cost Changes⁽²⁾
9/3/2009	Mod 140	REA 09-006, Laboratory Units (KCB, KLN, LAC, LAU & KLK) Furnace Design/Build Procurement; REA 09-009, PEG Vendor Design Costs-Pellet Press	54,520
11/12/2009	Mod 144	REA 08-004, Procurement Engineering, Sintering Furnace; add DOE Directive O 470.2B Independent Oversight and Performance Assurance Program	6,202,611
2/3/2010	Mod 150	REA 09-007, 09-015 Reconciliation of Safety Programmable Logic Controllers and GSA vehicle support; milestone fee correction	157,653
9/1/2010	Mod 161	REA 10-012/BCP 10-034, MFFF Waste Storage (VDQ) and Waste Nuclear Counting (VDT) Process Units Design/Build Procurement	158,432
12/15/2010	Mod 168	REA 10-003, Multifunctional Fuel	3,514,721
10/18/2011	Mod 186	Authorize an equitable adjustment for REA 10-022	24,977,409
1/30/2012	Mod 198	Authorize undefinitized scope to "implement the necessary actions to preserve the option for the addition o f plutonium metal oxidization capability to the MFFF"	800,000
4/30/2012	Mod 202	Authorize an equitable adjustment for REA 11-005	12,060,512
Subtotal			\$ 57,768,678
Total			\$ 108,653,274

CB&I AREVA MOX Services, LLC.
Summary of Contract Modifications Already Included
CLIN 0002, Option 1 ⁽¹⁾

Schedule 6.4

<u>Date</u>	<u>Mod No.</u>	<u>Mod Description</u>	<u>Total Cost Changes⁽²⁾</u>
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Sources:

Contract Modifications

Notes:

(1) MOX Services bilaterally agreed to seventeen Contract Modifications that included release language which noted, "the Contractor hereby releases the Government from any and all liability under this contract for further equitable adjustments or claims attributable to such circumstances giving rise to this REA." These Contract Modifications increased the amount of CLIN 0002 by \$50,884,596. For purposes of this REA, MOX Services is not claiming fee for these specific cost changes.

(2) Total cost changes to CLIN 0002 - Option 1 activities

(3) REA 15-004 for funding included an adjustment of \$12,039,634 for Contract Modifications with Release Language as summarized below:

Contract modifications prior to 2012 Rebaseline	\$ 6,757,354
Contract modifications post 2012 Rebaseline	\$ 5,282,280
REA 15-004 contract modification adjustment	\$ 12,039,634

The contract modifications prior to the 2012 Rebaseline have been included as adjustments to this claim.

(4) This cost adjustment includes \$57,768,678 in costs that overlap with cost growth included in this claim which were added to CLIN 0002 through Contract Modifications as of the Rebaseline Proposal without additional Fee. MOX is entitled to fee on these costs.

CB&I AREVA MOX Services, LLC.

Schedule 6.5

Management Reserve Pre-2007 EAC Baseline Adjustment Summary⁽¹⁾

Description	Management Reserve Amount	Claim Adjustment For Pre-2007 EAC Baseline Adjustment	Notes
MR Before Scrubbing "EAC Scrubs"	\$ 312,830,000	\$ -	On Contract
Base Contract "EAC Scrub"	30,716,000	-	Base Contract - Not Claimed
Option 1 "EAC Scrub"	165,146,000	87,710,202	Estimated Amount For Claim Areas
Option 1 Escalation "EAC Scrub"	58,826,000	47,143,992	Estimated Amount For Claim Areas
Subtotal	\$ 567,518,000 ⁽²⁾	\$ 134,854,194	
MR Not On Contract	\$ 86,346,000	\$ -	Not On Contract and Not Claimed
Total	\$ 653,864,000	\$ 134,854,194	

Sources:

Management Reserve information provided by MOX Services personnel

Notes:

(1) Management Reserve accounted for by MOX Services as of the 2007 Baseline was \$653,864,000, which included MR agreed to as part of CLIN 0002 (\$312.8 million) and "EAC Scrubs," which included (a) costs removed from the Base Contract cost estimates and subsequently added to MR (\$30.7 million); (b) costs removed from the Option 1 cost estimates and subsequently added to MR (\$165.1 million); (c) costs removed from the escalation associated with the Option 1 cost estimates and subsequently added to MR (\$58.8 million); and (d) MR associated with scope of work not on contract (\$86.3 million). This schedule identifies the original cost estimate that was scrubbed from the selected cost accounts. The selected cost accounts included were all cost accounts that are claimed in this claim. As a result, none of the cost reductions that were made internally to the 2007 Baseline have been considered for purposes of measuring cost growth. For purposes of this claim, MOX Services is not claiming fee on \$134,854,194.

(2) The \$567,518,000 is included in the CLIN 0002 contract value.

CB&I AREVA MOX Services, LLC.
Scrubbed Management Reserve Adjustment

Schedule 6.51

Management Area	Description	Scrubbed MR Amount	Adjustment Amount⁽¹⁾
06	Project Management	\$ 2,145,525	\$ 2,145,525
10	Title III Engineering	43,911,939	43,911,939
11	Regulatory Affairs	44,907,597	-
16	Process Unit Assembly	4,007,049	4,007,049
18	Temporary Facilities & Services	2,000,132	2,000,132
20	Cold Startup	35,645,557	35,645,557
21	(OPC) Operations Preparation	32,528,155	-
Total		\$ 165,145,954	\$ 87,710,202

Sources:

Schedule 6.52

Notes:

(1) Excludes Option 1 Management Areas not included in the claim.

Schedule 6.52

CB&I AREVA MOX Services, LLC.
Scrubs Detail

Area	MAFA	CACT	Scrubs
06	0601	6000	\$ 1,408
06	0601	6001	57,452
06	0602	6010	59,334
06	0602	6011	126,626
06	0603	6020	114,593
06	0603	6021	125,001
06	0603	6022	114,688
06	0604	6030	114,660
06	0604	6031	57,468
06	0604	6032	57,755
06	0604	6033	297
06	0604	6034	114,955
06	0604	6036	834,111
06	0604	6037	107
06	0604	6038	139,460
06	0605	6040	179,473
06	0606	6050	46,384
06	0606	6051	253
06	0606	6052	361
06	0606	6053	230
06	0606	6054	219
06	0607	6060	690
Subtotal MA 06			\$ 2,145,525
10	1000	8001	\$ 937,727

Schedule 6.52

CB&I AREVA MOX Services, LLC.
Scrubs Detail

Area	MAFA	CACT	Scrubs
10	1000	8002	130,152
10	1000	8003	933,380
10	1000	8004	400,694
10	1000	8005	824,737
10	1000	8006	123,912
10	1001	8011	437,890
10	1002	8021	337,488
10	1002	8022	936,275
10	1002	8023	388,945
10	1002	8024	395,752
10	1002	8026	501,359
10	1002	8027	371,839
10	1003	8031	1,273,100
10	1003	8032	1,932,486
10	1003	8033	1,089,198
10	1003	8034	705,770
10	1003	8035	1,239,371
10	1003	8036	234,866
10	1003	8037	3,441,989
10	1003	8038	851,061
10	1004	8041	784,663
10	1004	8042	1,289,271
10	1004	8043	7,280,515
10	1004	8044	196,537
10	1004	8045	1,833,081

Schedule 6.52

CB&I AREVA MOX Services, LLC.
Scrubs Detail

Area	MAFA	CACT	Scrubs
10	1004	8046	727,086
10	1004	8047	81,287
10	1004	8048	2,172,113
10	1004	8049	1,615,493
10	1005	8051	1,137,978
10	1005	8052	1,633,367
10	1005	8053	1,578,960
10	1005	8054	1,921,870
10	1005	8055	478,450
10	1005	8056	126,077
10	1005	8057	2,663,380
10	1005	8058	903,820
Subtotal MA 10			\$ 43,911,939
11	1100	8101	\$ 770,787
11	1100	8102	848,935
11	1102	8121	4,681,137
11	1102	8122	4,176,007
11	1103	8132	520,720
11	1103	8133	320,547
11	1104	8141	833,166
11	1104	8142	3,171,953
11	1104	8143	808,266
11	1104	8144	968,058
11	1104	8145	248,929

Schedule 6.52

CB&I AREVA MOX Services, LLC.
Scrubs Detail

Area	MAFA	CACT	Scrubs
11	1104	8146	312,855
11	1104	8147	189,700
11	1105	8151	1,173,677
11	1105	8152	1,463,819
11	1105	8153	2,562,396
11	1105	8154	1,526,558
11	1105	8155	512,985
11	1105	8156	155,140
11	1106	8161	4,893,351
11	1106	8162	5,335,742
11	1106	8164	6,968,135
11	1109	8165	1,245,988
11	1109	8192	1,218,746
Subtotal MA 11			\$ 44,907,597
16	1600	8601	\$ 138,956
16	1600	8602	1,179,386
16	1600	8603	155,564
16	1602	8621	175,286
16	1603	8631	2,357,857
Subtotal MA 16			\$ 4,007,049
18	1805	8851	\$ 2,000,132
Subtotal MA 18			\$ 2,000,132
20	2000	9001	\$ 3,939,878

Schedule 6.52

CB&I AREVA MOX Services, LLC.
Scrubs Detail

Area	MAFA	CACT	Scrubs
20	2000	9002	923,234
20	2000	9003	229,724
20	2000	9004	84,635
20	2002	9021	314,589
20	2002	9022	789,289
20	2002	9023	169,426
20	2002	9024	707,696
20	2002	9026	819,526
20	2003	9031	1,880,803
20	2003	9032	817,692
20	2004	9041	8,015,752
20	2004	9042	6,151,814
20	2004	9043	6,117,792
20	2004	9044	597,349
20	2004	9045	731,941
20	2004	9046	476,075
20	2004	9047	2,878,342
Subtotal MA 20			\$ 35,645,557
21	2100	9501	\$ 1,338,639
21	2100	9502	142,417
21	2100	9503	101,142
21	2100	9504	1,272,887
21	2100	9506	12,876
21	2101	9518	31,561

Schedule 6.52

CB&I AREVA MOX Services, LLC.
Scrubs Detail

Area	MAFA	CACT	Scrubs
21	2102	9522	223,454
21	2102	9523	7,348,083
21	2102	9524	8,875,286
21	2102	9525	9,934,950
21	2103	9531	198,260
21	2103	9532	469,012
21	2103	9533	362,359
21	2103	9534	853,914
21	2103	9535	45,509
21	2103	9536	29,172
21	2103	9537	1,288,634
Subtotal MA 21			\$ 32,528,155
Total			\$ 165,145,954

Sources:

"Scrubs Detail.xlsx"

CB&I AREVA MOX Services, LLC.

Schedule 6.53

Estimated Escalation Management Reserve on Claimed MA's

Description	Amount	Source
Escalation "EAC Scrub"	\$ 58,826,000	MOX Services
Percent of MR on Claimed MA's	80.14%	Schedule 6.54
Total Escalation Adjustment	\$ 47,143,992	

CB&I AREVA MOX Services, LLC.
MR Analysis (In Thousands)

Schedule 6.54

	[A]	[B] = A / Total A	[C]	[D] = C / Total A
Management Area	ETC	% of Total	Adjustment Amount ⁽¹⁾	% of Total
06	\$ 193,372		\$ 193,372	
10	176,743		176,743	
11	56,349		-	
15	66,615		66,615	
16	22,666		22,666	
17	1,331,488		1,331,488	
18	57,737		57,737	
20	159,961		159,961	
21	258,485		-	
Option 1 Subtotal	\$ 2,323,416	92.70%	\$ 2,008,582	80.14%
01	46,722		-	
12	36,634		-	
13	45,752		-	
14	53,773		-	
Base Subtotal	\$ 182,881	7.30%	\$ -	
Total	\$ 2,506,297	100.00%	\$ 2,008,582	80.14%

Sources:

"2007 BASELINE Cost Summary.pdf"

CB&I AREVA MOX Services, LLC.
MR Analysis (In Thousands)

Schedule 6.54

Notes:

(1) Excludes Base Contract amounts and Option 1 Management Areas not included in the claim.

CB&I AREVA MOX Services, LLC.
Incentive Fee Payments Outstanding

Schedule 6.6

<u>Description</u>	<u>Amount</u>
FY2011 Incentive Fee Payments	\$ 15,400,000
FY2012 Incentive Fee Payments	14,500,000
FY2013 Incentive Fee Payments	9,500,000
FY2014 Incentive Fee Payments	8,490,019
FY2015 Incentive Fee Payments	5,000,000
Total Incentive Fee Payments Outstanding	\$ 52,890,019
Total Interest Due	<u>\$ 3,537,748</u>
Total Incentive Fee Payments with Interest	<u>\$ 56,427,767</u>

Sources:

Contract, Part III, Section J, Attachment 7 at p. J.7.6 (Project / Cost
Incentive Fee Band & Schedule)

CB&I AREVA MOX Services, LLC.
Interest on Incentive Fee Payments Outstanding

Schedule 6.7

				Interest Due ⁽¹⁾											
		Period Beginning	7/1/2012	1/1/2013	7/1/2013	1/1/2014	7/1/2014	1/1/2015	7/1/2015	1/1/2016	7/1/2016				
		Period End	12/31/2012	6/30/2013	12/31/2013	6/30/2014	12/31/2014	6/30/2015	12/31/2015	6/30/2016	9/30/2016				
Incentive Payment Period	Incentive Fee Payment Amount ⁽¹⁾	Demand For Payment Date ⁽²⁾	Start Date of Interest Calculation ⁽³⁾	7/1/2012 - 12/31/2012	1/1/2013 - 6/30/2013	7/1/2013 - 12/31/2013	1/1/2014 - 6/30/2014	7/1/2014 - 12/31/2014	1/1/2015 - 6/30/2015	7/1/2015 - 12/31/2015	1/1/2016 - 6/30/2016	7/1/2016 - 9/30/2016	Total Interest		
Interest Rate				1.750%	1.375%	1.750%	2.125%	2.000%	2.125%	2.375%	2.500%	1.875%			
Q1 FY 2011 Incentive Fee	\$ 3,850,000	10/31/2012	11/14/2012	\$ 8,676	\$ 26,106	\$ 33,780	\$ 40,346	\$ 38,605	\$ 40,346	\$ 45,844	\$ 47,729	\$ 17,997	299,430		
Q2 FY 2011 Incentive Fee	3,850,000	10/31/2012	11/14/2012	8,676	26,106	33,780	40,346	38,605	40,346	45,844	47,729	17,997	299,430		
Q3 FY 2011 Incentive Fee	3,850,000	10/31/2012	11/14/2012	8,676	26,106	33,780	40,346	38,605	40,346	45,844	47,729	17,997	299,430		
Q4 FY 2011 Incentive Fee	3,850,000	10/31/2012	11/14/2012	8,676	26,106	33,780	40,346	38,605	40,346	45,844	47,729	17,997	299,430		
Q1 FY 2012 Incentive Fee	\$ 3,625,000	10/31/2012	11/14/2012	\$ 8,169	\$ 24,580	\$ 31,806	\$ 37,988	\$ 36,349	\$ 37,988	\$ 43,165	\$ 44,940	\$ 16,946	\$ 281,931		
Q2 FY 2012 Incentive Fee	3,625,000	10/31/2012	11/14/2012	8,169	24,580	31,806	37,988	36,349	37,988	43,165	44,940	16,946	281,931		
Q3 FY 2012 Incentive Fee	3,625,000	10/31/2012	11/14/2012	8,169	24,580	31,806	37,988	36,349	37,988	43,165	44,940	16,946	281,931		
Q4 FY 2012 Incentive Fee	3,625,000	10/31/2012	11/14/2012	8,169	24,580	31,806	37,988	36,349	37,988	43,165	44,940	16,946	281,931		
Q1 FY 2013 Incentive Fee	\$ 2,375,000	2/1/2013	2/15/2013	\$ -	\$ 12,078	\$ 20,838	\$ 24,889	\$ 23,815	\$ 24,889	\$ 28,280	\$ 29,443	\$ 11,102	\$ 175,335		
Q2 FY 2013 Incentive Fee	2,375,000	5/1/2013	5/15/2013	-	4,116	20,838	24,889	23,815	24,889	28,280	29,443	11,102	167,372		
Q3 FY 2013 Incentive Fee	2,375,000	8/1/2013	8/15/2013	-	-	15,714	24,889	23,815	24,889	28,280	29,443	11,102	158,133		
Q4 FY 2013 Incentive Fee	2,375,000	11/1/2013	11/15/2013	-	-	5,238	24,889	23,815	24,889	28,280	29,443	11,102	147,657		
Q1 FY 2014 Incentive Fee	\$ 2,122,505	2/3/2014	2/17/2014	\$ -	\$ -	\$ -	\$ 16,435	\$ 21,283	\$ 22,243	\$ 25,274	\$ 26,313	\$ 9,922	\$ 121,470		
Q2 FY 2014 Incentive Fee	2,122,505	5/1/2014	5/15/2014	-	-	-	5,684	21,283	22,243	25,274	26,313	9,922	110,719		
Q3 FY 2014 Incentive Fee	2,122,505	8/1/2014	8/15/2014	-	-	-	-	16,050	22,243	25,274	26,313	9,922	99,801		
Q4 FY 2014 Incentive Fee	2,122,505	11/3/2014	11/17/2014	-	-	-	-	5,117	22,243	25,274	26,313	9,922	88,869		
Q1 FY 2015 Incentive Fee	\$ 1,250,000	2/2/2015	2/16/2015	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 9,752	\$ 14,884	\$ 15,497	\$ 5,843	\$ 45,976		
Q2 FY 2015 Incentive Fee	1,250,000	5/1/2015	5/15/2015	-	-	-	-	-	3,348	14,884	15,497	5,843	39,572		
Q3 FY 2015 Incentive Fee	1,250,000	8/3/2015	8/17/2015	-	-	-	-	-	-	11,062	15,497	5,843	32,402		
Q4 FY 2015 Incentive Fee	1,250,000	11/2/2015	11/16/2015	-	-	-	-	-	-	3,660	15,497	5,843	25,000		
Total Interest				\$ 67,377	\$ 218,940	\$ 324,970	\$ 435,010	\$ 458,813	\$ 514,960	\$ 614,743	\$ 655,691	\$ 247,243	\$ 3,537,748		

Sources:

(1) Schedule 6.6

FAR 52.232-17

41 USC 7109

Prompt Payment Interest Rate History, Bureau of the Fiscal Service

(2) Demand for payment for FY 2011 and FY 2012 Incentive Fee is based on the date of the Contract Proposal 12-004 (2012 Rebaseline). The remaining Incentive Fee demand for payment is the first business day one month after quarter end.

(3) The start of the interest calculation is the first business day fourteen days after the demand for payment date per Contract section J.7.5.

CB&I AREVA MOX Services, LLC.
Incentive Fee Analysis

Schedule 6.8

	Description	Amount
<i>a</i>	October 31, 2012 Contract Proposal Value (Without Fee)	\$ 6,352,406,548
<i>b</i>	Less: MR included in October 31, 2012 EAC	\$ (311,261,846)
<i>c</i>	Plus: 2012 Rebaseline Addendum	\$ 285,916,668 ⁽¹⁾
<i>d = a+b+c</i>	Adjusted October 31, 2012 Contract Proposed EAC	\$ 6,327,061,370
<i>e</i>	Then Current CLIN 0002 Contract Value (Mod 205, June 2012)	\$ 3,925,846,423 ⁽²⁾
<i>f</i>	Add: Total Claim for Changes	2,464,490,271
<i>g = e+f</i>	Estimated Cost of CLIN 0002	\$ 6,390,336,694
<i>h</i>	Add: Incentive Fee Band	\$ 200,000,000
<i>i = g+h</i>	Max Incentive Fee Ceiling	\$ 6,590,336,694
<i>j = d - i</i>	Amount Above/(Below) Ceiling	\$ (263,275,324)

Sources:

October 31, 2012 MOX Project Rebaseline Proposal, Executive Summary Exhibit ES-1 (Prior to Addendum)
December 2012 MOX Monthly Status Report, Performance Report, p. 7 (Management Reserve)
Contract Modification 205, June 27, 2012
Schedules 6.01 and 1.41.

Notes:

(1) Between January 2013 and May 2013, MOX addended its 2012 Rebaseline Proposal with additional requested budget in the amount of \$285,916,668.

(2) This Contract Value includes \$811,164,789 in Base Contract costs and excludes \$5,957,832 of DMO.

EXHIBIT B



Department of Energy
National Nuclear Security Administration
MOX Project Management Office
Savannah River Site
P.O. Box A
Aiken, South Carolina 29802



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Mr. Rex Norton
Vice President, Contracts and Supply Chain Management
CB&I AREVA MOX Services, LLC
Savannah River Site
P.O. Box 7097
Aiken, SC 29804-7097

SUBJECT: Contract No. DE-AC02-99CH10888, MOX Fuel Fabrication Facility (MFFF); Response to DCS-DOE-005426, Certified Claim for Incentive Fee, C 16-003 and Demand for Repayment of Unearned Provisional Incentive Fee—Contracting Officer's Final Decision

REFERENCE: (1) MOX Services Letter DCS-DOE-005426, dated 29 September 2016
(2) MOX Services Letter DCS-DOE-004882, dated 25 June 2015
(3) NNSA Letter NA-APM-16-0098, dated 09 March 2016

Dear Mr. Norton:

MOX Services submitted the certified claim (hereafter "claim 16-003" or "the claim") at Reference (1) to the National Nuclear Security Administration (NNSA) on 29 September 2016. This claim follows (i) MOX Services' submission of a Request for Equitable Adjustment (hereafter "REA 15-001" or "the REA") at Reference (2) asserting entitlement to Cost/Schedule Incentive Fee under the subject contract; and (ii) NNSA's subsequent determination at Reference (3) that MOX Services did not demonstrate entitlement to an equitable adjustment.

After a thorough and impartial review of claim 16-003, NNSA has determined the substantive bases for entitlement do not materially differ from those asserted in REA 15-001, with limited exceptions described below. The claim did recharacterize some of the rationale presented in the REA, while it deemphasized others, and made some changes in the supporting documentation.

In both the REA and the claim, MOX Services alleged that three "changes" entitle it to an equitable adjustment. First, NNSA's alleged refusal to authorize early pilot procurements of process unit equipment. Second, the (mutually-agreed) removal of the preference in the original contract that MOX Services not self-perform construction work and that MOX Services use Firm Fixed Price subcontracts for construction to the maximum extent practicable. Third, the assertion that the Government forced MOX Services to agree to the Option 1 price before design was sufficiently complete to begin construction.

The claim asserts entitlement of \$56,427,767, consisting of \$52,890,019 in Cost/Schedule Incentive Fee plus \$3,537,748 in interest, whereas the REA asserted \$50,390,019 in Cost/Schedule Incentive Fee. The apparent difference is due to the claim demanding \$3,537,748 in interest and the inclusion of the entire fiscal year 2015 Cost/Schedule Incentive Fee, vice the first two quarters only included in the REA¹.

NNSA noted that a number of the cost figures in the claim differed from those in the REA. For instance, the amount of cost growth MOX Services attributed to “design immaturity” increased from \$994M in the REA² to \$1,199M in the claim³. However, MOX Services provided no explanation for the change. Also, the claim included additional pages of summary level cost data, but similar to the REA, the data was inadequate to substantiate the claimed cost impacts⁴.

MOX Services included an additional claimed basis for entitlement in claim 16-003 that was not included in REA 15-001. MOX Services appears to argue that all increases to the estimated cost stated in CLIN 0002, no matter the reason for the increase, automatically result in an increase to the Target Cost for purposes of determining entitlement to Cost/Schedule Incentive Fee under the contract. Specifically, MOX Services stated, “The contract does not distinguish the amounts added to CLIN 002 based on whether...the funds are to cover contract changes...or to cover cost overruns,” and further, that “increases to Target Cost assures that MOX Services will remain within the cost parameters that entitle it to incentive fee” because “the EAC is linked to Target Cost such that as EAC increases so must CLIN 0002”⁵. This interpretation is disingenuous and would render the incentive fee provisions of the contract utterly meaningless and superfluous. It is fundamental to incentive fee contracts that the Target Cost is not adjusted upwards for cost overruns incurred by the contractor in performance of the contract. Accordingly, FAR clause 52.216-10, Incentive Fee, expressly states that the Target Cost is “the estimated cost of this contract as initially negotiated, adjusted in accordance with paragraph (d). . .” (underlining added). Paragraph (d) of the clause allows for adjustments only where the contractor is entitled to an equitable adjustment; not for cost overruns caused by the contractor’s performance. To interpret the contract in the manner which MOX Services has suggested would mean that the contractor could never exceed the Target Cost and would always be entitled to incentive fee. This would have the effect of converting the incentive fee into a fixed fee. It defies logic and common sense to suggest that this is what the parties intended by “incentive fee.” For these reasons, MOX Services’ assertions lack merit.

¹ As the claim correctly notes, the parties have a separate dispute currently before Civilian Board of Contract Appeals regarding the “fee schedule” applicable to the contract.

² REA 15-001, page 71 of 1,208.

³ Claim 16-003, page 203 of 1,465.

⁴ MOX Services indirectly acknowledges its systematic weakness in tracking and allocating major cost elements by stating “...while MOX Services knows it experienced \$145,856,514 in cost growth on QA cost accounts”, it had to rely on “estimates provided by MOX Services’ QA personnel” in order to develop a “characterization and allocation” of these costs (Claim 16-003, footnote #149, pages 135-136 of 1,465). This demonstrates MOX Services is only able to capture incurred costs at the cost account level, and is not able to systematically allocate those costs to appropriate discreet work scope.

⁵ Claim 16-003, pages 231-232 of 1,465.

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MOX Services' claim also included a novel argument related to its asserted basis to entitlement regarding the construction performance strategy agreed by the parties and initially contained in the contract, but subsequently bilaterally changed at MOX Services' behest. Specifically, MOX Services argues that the contract requirement related to construction performance is "much like a defective specification" because it "failed" and "had to be changed, entitling MOX Services to an adjustment" in estimated cost⁶. Although MOX Services provided several instances of case law relating to contractor entitlement due to defective specifications, the defective specification cases cited are not at all analogous to the changes agreed upon by the Parties in a bilateral contract modification. As explained in the response to the REA, the bilateral modification effecting the changes did not include an increase in Target Cost because the change was made at the request of MOX Services for its own convenience, and because MOX Services did not anticipate or request a cost increase due to the change. MOX Services also failed to prove that the change actually caused a cost increase.

In any event, all of the circumstances which MOX Services faults for causing all of its increased costs of contract performance for its entire REA/Claim occurred from 2000-2007 (and were known or should have been known by MOX Services at that time), whereas it submitted the instant claim in September 2016. Therefore, MOX Services did not assert its claim to an equitable adjustment within the six-year statute of limitations imposed by the Contract Disputes Act of 1978, and MOX Services' claim is time-barred in its entirety.

This letter transmits the Contracting Officer's Final Decision with respect to claim 16-003. This claim is denied in its entirety because MOX Services did not demonstrate that it is entitled to an equitable adjustment under the contract, and is time barred from any such claim under the statute of limitations. Except as addressed above, the claim's substantive asserted bases for entitlement have not changed materially from those presented in REA 15-001. Therefore, the detailed analysis and rationale NNSA presented at Reference (3) in denying entitlement under said REA apply equally to the instant claim, and need not be restated here.

Additionally, for substantially the same reasons as those articulated in Reference (3), NNSA hereby determines that MOX Services is not entitled to unearned Incentive Fee previously paid to MOX Services on a provisional basis in the amount of \$21,600,000.

By way of background, the subject contract includes three types of fee: (1) Fixed Fee, (2) Award Fee, and (3) Incentive Fee. Further, there are three distinct subsets of Incentive Fee applicable to construction of the Mixed Oxide Fuel Fabrication Facility (MFFF)⁷: (1) Cost/Schedule Incentive Fee, (2) Milestone Incentive Fee, and (3) Collateral Savings/Cost Share Incentive Fee. This determination addresses only Cost/Schedule Incentive Fee⁸.

⁶ Claim 16-003, page 187 of 1,465.

⁷ The contract provides for fee related to both the Base Contract and Option 1. To summarize briefly, the Base contract is for MFFF design, and Option 1 is for MFFF construction. This determination addresses Option 1 only.

⁸ Section J, Attachment 7 (Incentive/Milestone Fee Plan), Paragraph 7 – Final Incentive Fee Payment. The three subsets of Incentive Fee have distinct contractual fee pools and measurement bases. Cost/Schedule Incentive fee is paid throughout the performance period contained in the Incentive/Milestone Fee Plan based on the contractor

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The Incentive/Milestone Fee Plan included in the contract provides that “final incentive fee determination will be calculated by the CO subsequent to the end of the final evaluation period, i.e., September 2016 (if that date is not extended)”⁹. The contract terms that describe the Cost/Schedule Incentive Fee arrangement, and control the final determination thereof, are located at Sections B.3 and J (Attachment 7) of the contract, respectively.

There are two parameters (referred to in the contract as the “Incentive Fee Band”) within which the contractor’s performance must remain in order to earn Cost/Schedule Incentive Fee, namely:

- (1) Cost, which is measured by a certain number of dollars by which the contractor’s Estimate at Completion¹⁰ (EAC) may exceed the estimated cost of CLIN 0002 (located at Section B.2); and
- (2) Schedule, which is measured by a certain number of months by which the project completion date estimated in the EAC may exceed the contractual period of performance end date for MFFF Construction of 14 October 2016 (located at Section F.1).

The Cost/Schedule Incentive Fee arrangement was structured so that the contractor could invoice for Incentive Fee in quarterly increments, over the period of performance contemplated in the contract -- fiscal years 2008-2016¹¹. The respective cost and schedule constraints are established by fiscal year, and change over time to gradually become more restrictive¹². By the final year of the CLIN 0002 performance as contemplated in the contract (i.e., fiscal year 2016), both the cost and schedule bands reduce to zero. That is, the total costs and schedule, respectively, for physical completion and acceptance of the MFFF may not exceed (1) the estimated CLIN 0002 cost at Section B.2, or (2) the completion date at Section F.1.

The contract provides that when the contractor’s performance breaches the Cost/Schedule Incentive Fee parameters, the following occurs: (1) payment of such Incentive Fee stops; and (2) a certain subset of previously paid Incentive Fee remains provisional unless the contractor’s

remaining within specific CLIN 0002 cost and schedule performance parameters. Milestone Incentive Fee is determined by completion of specific tasks before specific respective due dates, with discrete dollar amounts associated with each task, as identified in the Incentive/Milestone Fee Plan. The Collateral Savings/Cost Share Incentive Fee does not have a specific fee pool. Rather, earnable fee is determined by the extent to which the actual Total Project Cost (which differs from CLIN 0002 cost) for project completion is less than the estimated Total Project Cost contained in the contract. Per Section B.4 of the contract, Collateral Savings/Cost Share Incentive Fee is designed to “incentivize project completion below project target costs” (emphasis in original). Project completion has not occurred, and is unlikely to occur in the foreseeable future. Therefore, the Collateral Savings/Cost Share Incentive is not subject to final determination at this time.

⁹ *Id.* In the context of this quote, “CO” is an abbreviation for Contracting Officer. Additionally, it is worth noting that while Section J, Attachment 7, Paragraph 7 shows that September 2016 is the end of the Cost/Schedule Incentive Fee evaluation period, Section B.3(b)(1)(i) establishes the Section F.1 completion date of 14 October 2016 as the applicable schedule parameter. Hereafter in this determination, the October date is used.

¹⁰ The EAC is a contract deliverable that is required to be updated annually by the contractor, see Section J, Attachment 1, subparagraph III.G.6.d.(6).

¹¹ The fiscal year is 1 October through 30 September.

¹² See contract Section J, Attachment 7, Attachment 1 – Project/Cost Incentive Fee Band & Schedule.

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performance improves and returns to levels that fall within the applicable parameters¹³. The effect of designating fee as “provisional” is that said provisional fee is subject to be reimbursed to the Government if the final fee calculated by the Contracting Officer is less than the sum of prior quarterly provisional fee payments¹⁴. This determination is based on the contractor’s performance, which “will be evaluated solely by the Government”¹⁵.

In accordance with Section J, Attachment 7, Paragraph 7 of the contract, NNSA hereby issues this Contracting Officer’s Final Decision as to MOX Services’ entitlement to Cost/Schedule Incentive Fee. The contractor’s cost and schedule performance are summarized as follows:

- The contractor’s current EAC, which is materially understated, is \$9.9B¹⁶. This far exceeds the applicable adjusted Target Cost value of \$3,937,855,913¹⁷. Thus, the contractor is ineligible to earn Cost/Schedule Incentive Fee due to its cost performance.
 - As of contract modification number 252, dated 14 September 2016, the estimated cost listed for CLIN 0002 in Section B.2 was \$5,070,855,913. However, the CLIN 0002 estimated cost has only been increased in order to account for the contractor’s cost overruns. This action was necessary from a mechanical perspective in order to continue work, because the contract contains the Limitation of Cost clause¹⁸. However, the contract also provides that for the purposes of Cost/Schedule Incentive Fee, “CLIN 0002 shall be adjusted as necessary to account for changes to the prime contract”¹⁹. Thus, adjustments in the value of CLIN 0002 for any reason other than changes to the prime contract do not adjust the CLIN 0002 value for the purposes of Cost/Schedule Incentive Fee calculation²⁰.
- The estimated project completion date in the contractor’s current EAC, which is unrealistically early, is 2029²¹. This far exceeds the Section F contract completion date

¹³ Section B.3(b)(1)(iii) of the contract.

¹⁴ Section J, Attachment 7, subparagraph C.7 of the contract.

¹⁵ Section B.3(b)(1)(iii) of the contract.

¹⁶ DCS-DOE-005323 - Contract No. DE-AC-02-99CH10888: MOX Fuel Fabrication Facility Project 2016 Estimate at Completion (EAC) Submittal in Response to NA-APM-16-0134, dated 14 July 2016.

¹⁷ The Target Cost is identified in the contract as the value of CLIN 0002. See Section J.7.1, item 4. Paragraph (b) of FAR Clause 52.216-10, Incentive Fee, defines “Target Cost” as “the estimated cost of this contract as initially negotiated, adjusted in accordance with paragraph (d). . . .” (underlining added). Paragraph (d) of the same clause provides: “When the work is increased or decreased by a modification to this contract or when any equitable adjustment in the target cost is authorized under any other clause, equitable adjustments in the target cost, target fee, minimum fee, and maximum fee, as appropriate, shall be stated in a supplemental agreement to this contract.” Accordingly, the Target Fee is the initially negotiated value for CLIN 0002, as adjusted via supplemental agreements for fee-bearing changes to the scope of work, equaling a total of \$3,937,855, 913. Adjustments to the Target Cost do not include cost overruns resulting from the contractor’s performance.

¹⁸ Section I of the contract, FAR clause 52.232-20 -- Limitation of Cost (Apr 1984).

¹⁹ Section J of the contract, Attachment 7, subparagraph 6.A.

²⁰ The contractor asserted in REA 15-001, submitted via letter DCS-DOE-004882 on 25 June 2015, that changes had occurred to the prime contract, and that it was entitled to the full amount of the fee contained in the contract. In denying the REA in its entirety via letter NA-APM-16-0098 on 9 March 2016, NNSA found that no changes to the contract occurred, and the contractor was not entitled to the fee contained in the contract.

²¹ DCS-DOE-005323, dated 14 July 2016.

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of 14 October 2016. Thus, the contractor is ineligible to earn Cost/Schedule Incentive Fee due to its schedule performance.

Therefore, the Contracting Officer's Final Decision is that no Incentive Fee has been earned or is prospectively earnable under the contract. The only amount of the Cost/Schedule Incentive Fee that is not required to be returned by the contractor to NNSA is the portion that is no longer considered provisional. The provisional amount that must be returned to the Government is described below.

The contractor invoiced and was paid for 12 quarterly Cost/Schedule Incentive Fee payments -- four each for fiscal years 2008, 2009, and 2010. The contractor invoiced for Cost/Schedule Incentive Fee for the first quarter of fiscal year 2011 (i.e., October – December 2010) in invoice number CH10888-147C, which was submitted to NNSA on 17 February 2011. NNSA rejected payment of this invoice on 18 February 2011 because the contractor breached the contract cost parameter when the contractor's EAC (which is required to be submitted in July of each year in accordance with the contract) was adjusted for known and expected cost increases that occurred after submission of the EAC in effect at the time. Specifically, the applicable CLIN 0002 value was \$3,856,095,000²² and Incentive Fee parameter was \$200,000,000; which means the projected EAC cost would be required to be less than \$4,056,095,000²³ in order for the contractor to be eligible for the quarterly Cost/Schedule Incentive Fee payment. However, NNSA calculated the adjusted EAC value as \$4,079,156,000²⁴, which breached the cost parameter by over \$23M. The contractor's cost/schedule performance never recovered after this point, and in fact, worsened.

The contract provides that Cost/Schedule Incentive Fee payments are 100% provisional for the 12 months following the period in which the respective quarterly payment is "earned", and that "At the end of the fifth quarter following the quarter the incentive fee is earned, 50% of the Interim Incentive Fee payments received by the Contractor will become permanent provided the Contractor's performance is still within established parameters"²⁵. Given the timing of when NNSA became aware that the contractor's performance breached the established cost parameters (i.e., February 2011, which falls within the 2nd quarter of fiscal year 2011), 100% of fee paid remains provisional for the 1st quarter of fiscal year 2010, and all subsequent quarters for which fee was paid. This is because the fifth quarter following the 1st quarter of fiscal year 2010 is the 2nd quarter of fiscal year 2011. For all previous quarters (i.e., the 8 quarters in fiscal years 2008 and 2009), 50% of the fee is provisional. This concept is illustrated graphically in Attachment 2 of the Incentive/Milestone Fee Plan.

²² Rounded to the nearest thousand.

²³ *Id.*

²⁴ *Id.* NNSA calculated this value by beginning with MOX Services' then-reported EAC of \$4,017,156,000, and adjusting upward for (i) \$25M in cost variance not accounted for in the EAC, (ii) known cost increases to civil-structural subcontracts of \$35M not captured in the EAC, and (iii) \$2M in net trends processed by MOX Services in January-February 2011.

²⁵ Section B.3(b)(1)(iii) of the contract.

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Given these facts, the provisional fee payments and values are summarized in the chart below:

Period Earned (FY, Quarter)	Quarterly Incentive Amount Available	Provisional %	Provisional Value
2008, Q1	\$750,000	50%	\$375,000
2008, Q2	\$750,000	50%	\$375,000
2008, Q3	\$750,000	50%	\$375,000
2008, Q4	\$750,000	50%	\$375,000
2009, Q1	\$3,000,000	50%	\$1,500,000
2009, Q2	\$3,000,000	50%	\$1,500,000
2009, Q3	\$3,000,000	50%	\$1,500,000
2009, Q4	\$3,000,000	50%	\$1,500,000
2010, Q1	\$3,525,000	100%	\$3,525,000
2010, Q2	\$3,525,000	100%	\$3,525,000
2010, Q3	\$3,525,000	100%	\$3,525,000
2010, Q4	\$3,525,000	100%	\$3,525,000

The sum of quarterly provisional Incentive Fee payments exceeds the overall final Cost/Schedule Incentive Fee determination of \$0 calculated by the Contracting Officer. The amount of provisional fee already paid is therefore \$21,600,000 greater than the amount of fee earned²⁶. Accordingly, this letter constitutes the Contracting Officer's Final Decision²⁷ that the amount of \$21,600,000 constitutes a debt to the Government in accordance with the contract terms, and repayment of this amount in full to NNSA within 30 calendar days of the date of this Contracting Officer's Final Decision is hereby demanded. In accordance with FAR 32.604, the contractor is notified of the following:

1. The contractor may contact the undersigned if it believes the debt is invalid or the amount is incorrect.²⁸
2. If the contractor agrees the debt is valid, remit a check payable to the payment office annotated with the contract number along with a copy of this letter to:

²⁶ See Exhibit 1 for additional details regarding the specific overpayments.

²⁷ Because the contractor has submitted the subject claim under the Contracts Dispute Act of 1978 alleging that the contractor is entitled to fee in addition to the \$21,600,000 of provisional fee already paid to the contractor, and because entitlement to all Cost/Schedule Incentive Fee claimed or paid, including the provisional fee, is in dispute, a Contracting Officer's Final Decision as to the repayment of this debt to the Government is appropriate pursuant to FAR 32.605(a)(1).

²⁸ However, note that this Contracting Officer's Final Decision as to the validity and amount of the debt is final for purposes of appealing this decision under the Contract Dispute Act.

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United States Department of Energy
Oak Ridge Office
Oak Ridge Financial Service Center
200 Administration Road
Oak Ridge, TN 37830

Also, please provide the undersigned a copy of the check for the contract file.

3. Any portion of the \$21,600,000 not paid within 30 calendar days from the date of this letter will bear interest. Interest shall be computed from the date of this demand for payment until full repayment by the contractor. The interest rate is provided in 41 U.S.C. 7109, which is applicable to the period in which the amount becomes due, and then at the rate applicable for each six-month period as established by the Secretary of Treasury until the entire amount is paid.
4. The Government may initiate procedures, in accordance with the applicable statutory and regulatory requirements, to offset the debt against any payments otherwise due the contractor.
5. The amount due is subject to administrative charges in accordance with the requirements of 31 U.S.C. 3717(e) and the Debt Collection Improvement Act of 1996.
6. The contractor may submit a request for installment payments or deferment of collection if immediate payment is not practicable or if the actual amount is disputed.

Please also note that FAR 32.607-2(a)(2) states, "Actions filed by contractors under the Disputes Clause shall not suspend or delay collection."

This is the final decision of the Contracting Officer. MOX Services may appeal this decision to the agency board of contract appeals. If MOX Services decides to appeal, it must, within 90 calendar days from the date MOX Services receives this decision, mail or otherwise furnish written notice to the agency board of contract appeals and provide a copy to the undersigned Contracting Officer. The notice shall indicate that an appeal is intended, reference this decision, and identify the contract by number.

With regard to appeals to the agency board of contract appeals, MOX Services may, solely at its election, proceed under the board's—

- (1) Small claim procedure for claims of \$50,000 or less or, in the case of a small business concern (as defined in the Small Business Act and regulations under that Act), \$150,000 or less; or
- (2) Accelerated procedure for claims of \$100,000 or less.

R. Norton

- 9 -

07 December 2016

Instead of appealing to the agency board of contract appeals, MOX Services may bring an action directly in the United States Court of Federal Claims (except as provided in 41 U.S.C. 7102(d), regarding Maritime Contracts) within 12 months of the date MOX Services receives this decision.

If you have any questions or comments please contact the undersigned at 803-952-2020.

Sincerely,



Lance Nyman
Lead Administrative Contracting Officer

NA-APM-17-0012

cc:

S. Cannon, NA-APM-1.4
J. McCullough, NA-APM-1.4
K. Buchanan, NA-APM-1.4
S. Hamlett, NA-APM-1.4
A. Rischbieter, NA-APM-1.4

M. Noone, SRFO
D. Del Vecchio, MOX Services
R. Ector, MOX Services
P. Whittingham, MOX Services
MOXPMODCA@srs.gov

R. Norton

- 10 -

07 December 2016

EXHIBIT 1:

Specific line of accounting and invoice data related to the \$21,600,000 overpayment, which occurred under CLIN 0007 of the contract, is shown below:

Invoice #	Invoice Date	Date Paid	Value	Line of Acct.
119B	16-Oct-08	23-Oct-08	\$1,500,000.00	89X0319.91 / 2220582
126A	5-May-09	13-May-09	\$3,000,000.00	89X0319.91 / 2720685
129A	5-Aug-09	14-Aug-09	\$3,000,000.00	89X0243.91 / 2222331
135A	3-Feb-10	4-Feb-10	\$3,525,000.00	89X0243.91 / 2222331
138B	14-May-10	20-May-10	\$3,525,000.00	89X0243.91 / 2222331
142C	28-Sep-10	5-Oct-10	\$3,525,000.00	89X0309.91 / 2220582
144C	23-Nov-10	30-Nov-10	\$3,525,000.00	89X0309.91 / 2220582

EXHIBIT C



Mr. Lance Nyman
Lead Contracting Officer
US Department of Energy, NNSA
Savannah River Site Office
P.O. Box A
Aiken, SC 29802

22 June 2017

DCS-DOE-005690
Response Required: Yes
Response Due: 21 AUG 17

SUBJECT: Contract No. DE-AC02-99CH10888, MOX Fuel Fabrication Facility Project, Certified Claim for Fee on Incurred Costs, C 17-001

Dear Mr. Nyman:

Pursuant to 41 U.S.C § 605(c) and Federal Acquisition Regulation (FAR) 52.233-1 Disputes Alternate I, CB&I AREVA MOX Services, LLC (MOX Services) hereby submits a certified claim in the amount of \$105,189,406.00 for fee on out of scope costs incurred through 10 April 2013 under the subject contract.

If you have any questions, please feel free to contact the undersigned at (803) 819-8654.

Sincerely,


Paul Whittingham
Contracts Manager

~~DOCUMENTS TRANSMITTED~~
~~CONTAIN DUO INFORMATION~~

Attachment: C 17-001 Fee on Incurred Costs Claim

cc: NNSA

S. Cannon
S. Hamlett (W/O Attachment)
A. Rischbieter (W/O Attachment)
MOXPMODCA@srs.gov

MOX

D. Del Vecchio
L. Wylie
R. Norton
G. Rousseau
K. Saunders
H. Chavous
EDMS



C 17-001

FEE ON INCURRED COSTS

**Contract DE-AC02-99CH10888
22 June 2017**

**DOES NOT CONTAIN OFFICIAL USE ONLY
INFORMATION**

Name/Org: S.Townsend/MOX Services Date: 02Nov17

~~—OFFICIAL USE ONLY—~~

~~May be exempt from public release under the Freedom of Information Act (5 U.S.C. 552),
exemption number and category: Exemption 4 - Commercial/Proprietary~~

~~Department of Energy review required before public release.~~

~~Name/Org: Paul Whittingham / Contracts Manager~~

~~Date: 22 June 2017~~

~~Guidance (if applicable): N/A~~

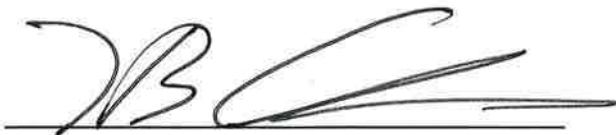
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CERTIFICATION OF CLAIM

I, Henry B. Chavous, make the following certification with respect to MOX Services' claim of entitlement (C 17-001) to \$105,189,406.00 of fee on out-of-scope incurred costs through April 2013, under Option 1 of Contract DE-AC02-99CH10888.

I certify that the claim is made in good faith; that the supporting data are accurate and complete to the best of my knowledge and belief; that the amount requested accurately reflects the contract adjustment for which the contractor believes the Government is liable; and that I am duly authorized to certify the claim on behalf of the contractor.



Henry B. Chavous
CB&I AREVA MOX Services, LLC

22 Jun 17

Date

I. EXECUTIVE SUMMARY

CB&I AREVA MOX Services, LLC (“MOX Services”) submits this Certified Claim (“Claim”) under Option 1 of contract DE-AC02-99CH10888 (the “Contract”) for the construction of the Mixed Oxide (“MOX”) Fuel Fabrication Facility (“MFFF” or “Project”). MOX Services claims that the U.S. Department of Energy (“DOE”)/National Nuclear Security Administration (“NNSA” or “Agency”) owes MOX Services a total of \$105,189,406 in fee on out-of-scope costs incurred through April 30, 2013.

For the period from the 2007 Baseline to the 2012 Rebaseline with Addendum, MOX Services estimates that under the Option 1 Contract the Project will incur out-of-scope costs of \$2.78 billion.¹ Taking into account unclaimed cost growth, contract modifications with release provisions that preclude additional fee on the funds added therein, and estimate-at-completion adjustments that predate the 2007 Baseline, MOX Services estimates additional costs of \$2.5 billion that are fee-bearing under the changes clause. Of these adjusted costs, \$1.05 billion had been incurred through April 2013, the cut-off date of this Claim. As set forth below, MOX Services is entitled to a 10% fixed fee on these out-of-scope costs, or \$105,189,406. This fee is immediately due and payable, as summarized in the chart below.²

	Incurred Claim Growth Through April 2013
Scope Changes	
Process Units Scope Change	\$ 705,645,643
Construction Strategy Change	109,468,108
MFFF Construction Change	439,643,850
Subtotal Scope Changes	\$ 1,254,757,601
Removal of Non-Claim Items	\$ (202,863,537)
Total Scope Changes	\$ 1,051,894,064
Claim Fee	10%
Claim Amount	\$ 105,189,406

¹ Overall, the estimated cost growth in this period is \$2.963 billion, \$179 million of which is under the Project’s Base Contract, and is not part of this claim.

² See Schedule 1.01 and its Supporting Schedules for a summary of the fee-bearing out-of-scope costs incurred from the 2007 Baseline through the 2012 Rebaseline with Addendum.

A. Relation Of Present Claim To Incentive Fee Claim

This Certified Claim for fee on out-of-scope costs shares entitlement bases with MOX Services' Incentive Fee Claim, C-16-003, submitted September 29, 2016. The Incentive Fee Claim demonstrated that MOX Services is entitled to payment of approximately \$56.4 million in suspended Incentive Fee and interest from Fiscal Years 2011-2015. In the Incentive Fee Claim, MOX Services showed, among other things, that throughout the period the contractor remained within the properly adjusted Cost Incentive Fee Band, a key parameter that determined MOX Services' entitlement to quarterly incentive fees.³

Specifically, MOX Services demonstrated that the Estimate at Completion ("EAC"), the majority component of Cost Incentive Fee Band, had to be adjusted for realized risks NNSA explicitly accepted in the Option 1 Contract and for the estimated costs of other out-of-scope changes for which the government was responsible. For the same reasons that the Incentive Fee Claim showed the government was responsible for the out-of-scope growth to the cost *estimates* (i.e., the EAC), here MOX Services claims that the government is responsible to pay fee on the *incurred* portion of those out-of-scope costs.

To avoid unnecessary complexity, MOX Services is limiting its request for fee on out-of-scope costs set forth in this Claim to such costs incurred through April 30, 2013, the date of the 2012 Rebaseline with Addendum.⁴ In the Incentive Fee Claim, MOX Services demonstrated that the government was responsible for the EAC growth during the period from the 2007 Baseline to the 2012 Rebaseline. The same changes that caused estimated cost growth in this period for purposes of incentive fee entitlement apply equally to this Claim for fee on incurred out-of-scope costs through the Rebaseline.⁵

Fee on out-of-scope costs incurred after April 2013 is not part of this Claim. MOX Services reserves the right to seek fee on out-of-scope costs that were incurred after April 2013, whether such costs arose from the substantive bases addressed in this Claim, from other causes, or both.

³ MOX Services' Incentive Fee Certified Claim also set forth reasons other than appropriate adjustments to the Incentive Fee Cost Band for why it is entitled to withheld incentive fee.

⁴ MOX Services submitted its 2012 Rebaseline proposal in October 2012, and a number of related Trends through May 2013. These Trends are referred to as the Addendum to the 2012 Rebaseline. Unless otherwise specified, this Claim uses the term "2012 Rebaseline" to refer to the 2012 Rebaseline with Addendum.

⁵ After the 2012 Rebaseline with Addendum, the government's failure to provide a funding profile for the Project made it impossible to determine the EAC. Limiting the present Claim to those increased costs incurred in the period through the 2012 Rebaseline with Addendum avoids the complexity inherent in distinguishing the impact on costs of the bases discussed in this Claim from those additional costs caused by the funding restrictions.

B. Contract Background and Key Provisions

Concerned with the growing threat of nuclear proliferation after the Cold War, the United States and Russia agreed in the early 1990s to reduce their stockpiles of weapons-grade plutonium. In 2000, the countries formalized this agreement in the Plutonium Management and Disposition Agreement (“PMDA”), where each nation agreed to dispose of no less than 34 metric tons of plutonium.⁶ To the extent practicable, the Russian and American plutonium disposition programs were to proceed in parallel.⁷

As the United States was negotiating the PMDA, it also analyzed various disposition methods for its surplus plutonium, ultimately determining to build a first-of-a-kind mixed oxide fuel fabrication facility at the Savannah River Site in South Carolina. The Project would be designed to mix the surplus plutonium with depleted uranium oxide to form mixed oxide fuel to generate nuclear power.

Although the Project would be based on then 20-year old MOX technology developed in France and used at the MELOX and La Hague plants, it has many unique features that increase its complexity. Among other things, the Project would start with weapons-grade plutonium, not spent fuel as the French reference plants do; it would combine the separate aqueous processing and MOX fuel fabrication processes into one plant; and it would be subject to U.S. quality, safety and security standards and regulations. The MOX Project would be regulated and licensed by the NRC.

In March 1999, DOE awarded the Contract for the U.S. MFFF to the predecessor in interest to MOX Services. The Contract was awarded on a cost-reimbursement basis and was structured as a base contract with a series of options. The base contract covered the design of the Project, and Option 1 was for the construction and cold start-up of the facility.

1. MOX Services’ Option 1 Proposal and the 2007 Baseline

In March 2006 MOX Services submitted its Option 1 Proposal. It proposed to start construction in September 2006, to complete construction in July 2012, and to complete cold start-up in August 2013. A year later, in April 2007, DOE approved the Critical Decision 2 performance baseline (“2007 Baseline”), and Critical Decision 3, the start of construction. DOE authorized MOX Services to begin construction on August 1, 2007.

⁶ Agreement Between the Government of the United States of America and the Government of the Russian Federation Concerning the Management and Disposition of Plutonium Designated as No Longer Required for Defense Purposes and Related Cooperation (2000) (“PMDA”), art. II, ¶ 1. (“Exhibit 1”).

⁷ *Id.* at art. II, ¶ 3.

In May 2008, the Option 1 contract was definitized in the amount of \$2,677,801,149,⁸ of which \$2,526,227,501 was estimated costs and \$151,573,648 was fee. The Option 1 contract also acknowledged that while the Management Reserve was not yet definitized (a \$150,000,000 placeholder was used), the adjusted Project costs would be increased by the amount of the agreed-upon Management Reserve.

As discussed below, the Project's scale, technical complexity, and its domestic and international political contexts presented unique challenges to MOX Services' performance. The parties acknowledged these challenges by embedding certain assumptions within the Option 1 scope, and by identifying certain risks to be beyond the Option 1's scope of work.

2. 2012 Rebaseline Proposal

By 2012, the Project's estimated cost and schedule had increased substantially. In January 2012, NNSA directed MOX Services to prepare a rebaseline proposal.⁹ In September 2012, MOX Services submitted BCP 12-121 Rev. 1, the precursor to its submission of the 2012 Rebaseline proposal the following month.¹⁰ The EAC was updated through an Addendum in December 2012.

The 2012 Rebaseline proposal updated Project cost and schedule projections. MOX Services estimated a new completion date of November 30, 2018 without schedule contingency, and provided a supporting Project schedule. The 2012 Rebaseline proposed increasing the estimated cost of construction, CLIN 002, to \$6,352,406,548.¹¹ This cost estimate was based on actual costs incurred through May 2012 and estimates through completion.

NNSA initially stated that "[t]he overall BCP is of very high quality and meets the requirements."¹² However, approval of the 2012 Rebaseline ultimately stalled as the Defense

⁸ This amount does not include \$798,405,507 for the Base Contract or the \$77,477,626 for the Early Option 1 (CD 2/3, Site Prep, CP-20). *See* Contract DE-AC02-99CH1088, Modification No. 124 (May 20, 2008) ("Mod 124") at B.2. ("Exhibit 2").

⁹ *See* Letter COR-SRSOCABM-1.19.2012-412183, from Robert Swett, Contracting Officer, NNSA, to Paul Whittingham, Contracts Manager, Shaw AREVA MOX Services, LLC (January 19, 2012). ("Exhibit 3").

¹⁰ Contract Proposal 12-004, MOX Project Rebaseline (Oct. 31, 2012) ("Proposal 12-004") ("Exhibit 4").

¹¹ *Id.* at 6.

¹² *See* Letter NA-12-086, from Kevin Hall, Deputy Federal Project Director, NNSA, to Kelly Trice, President and Project Manager, Shaw AREVA MOX Services, LLC (Sept. 17, 2012). ("Exhibit 5").

Contract Audit Agency (“DCAA”) was unable to complete an adequacy review.¹³ Although NNSA never acted upon the Rebaseline proposal, it directed MOX Services to report against BCP 12-121 in its Monthly Status Reports and EVMS.¹⁴

3. Contract Summary

This Claim describes MOX Services’ entitlement to fee on work that is beyond the Option 1 scope, but necessary to MFFF construction. MOX Services claims present entitlement to payment of fee on that portion of additional work for which the costs were incurred from the 2007 Baseline through April 2013. Such fees are necessary to make MOX Services whole for work required to complete Option 1, but that was not part of the 2007 Baseline.

a. Fee Structure

The scope of work set after the 2007 Baseline contemplates a total estimated cost of \$3,552,110,634,¹⁵ as provided in CLIN 002 in Contract Modification 124, dated May 20, 2008. The total fee pool was calculated as a percentage of the total estimated cost of CLIN 002. The fee was extensively negotiated, and the parties ultimately agreed that the fee would be equal to 7% of the estimated cost, with 1% contingent upon the exercise of Option 2 hot start-up.¹⁶

¹³ See Letter COR-SRSOCABM-3.20.2013-500979 from Carol Elliott, Contracting Officer, NNSA to Paul Whittingham, Contracts Manager, Shaw AREVA MOX Services, LLC (Mar. 20, 2013) (“Exhibit 6”).

¹⁴ See Letter NA 12-088 from Kevin Hall, Acting Federal Project Director, NNSA, to Kelly Trice, President and CEO, Shaw AREVA MOX Services, LLC (Sept. 24, 2012) (“September 24 Letter”). (“Exhibit 7”). The cost estimate for the 2012 Rebaseline was finalized at \$6,328,584,918 per the December 2012 Monthly Report (“Exhibit 8” at 7) and December 2012 PRISM database.

¹⁵ This amount includes the cost to perform Option 1 CLIN 002 and \$150,000,000 in Management Reserve.

¹⁶ See E-Mail from Craig Grochmal, to William Winkler, Ron Oakley and others, Subject, Option 1 negotiations-status (Nov. 14, 2007, 5:38PM). (“Exhibit 9”). In September 2011, DOE issued Modification 183, which increased the Option 1 fee percentage to 6.75%. Exhibit 10; Exhibit 11, Contract, at p. H.20. The incentive fee amounts in Attachment 1 to the Contract describe fee award under two different fee schedules – one in which the fee is 6.75% of the cost, and one in which the fee is 7% of the cost. *Id.* at Attachment 1.

The parties dispute whether MOX Services currently is entitled to an increase in available fee to 7% of estimated costs. See Exhibit 12 (CBCA No. 5395, Board decision on MOX Services’ appeal of contracting officer’s denial of claim for current entitlement to 7% fee).

b. Changes Clause

The Contract includes the clause, FAR 52.243-2, Changes (Cost Reimbursement).¹⁷ For services with supplies furnished, the Changes clause provides that the Contracting Officer may at any time, by written order, make changes within the general scope of the Contract in any one or more of the following: (1) description of services to be performed; (2) time of performance; (3) place of performance of the services; (4) drawings, designs, or specifications for specialty supplies; (5) method of shipment or packing of supplies; or (6) place of delivery.¹⁸

For construction work, the Contracting Officer may make changes by written order within the general scope of the Contract in the plans and specifications or instructions incorporated in the Contract.¹⁹

If any such change causes an increase or decrease in the estimated cost of, or the time required for, performance of any part of the work under the contract, whether or not changed by the order, or otherwise affects any other terms and conditions of the Contract, the Contracting Officer shall make an equitable adjustment in the: (1) estimated cost, delivery or completion schedule, or both; (2) amount of any fixed fee; and (3) other affected terms and shall modify the contract accordingly.²⁰

Although the Changes clause specifically addresses changes ordered by the Contracting Officer, it also applies to constructive changes.²¹ Furthermore, the Boards of Contract Appeals have interpreted the Changes clause reference to “other affected terms” to extend to incentive, award, and milestone fee provisions.²²

MOX Services here claims present entitlement to additional fixed fee under the Changes clause. Further, this Claim for fixed fee comports with the Contract’s fee

¹⁷ Contract, Exhibit 11 at I.5.

¹⁸ FAR 52.243-2 (Alt. II).

¹⁹ FAR 52.243-2 (Alt. III).

²⁰ FAR 52.243-2(b).

²¹ See *Northrop Grumman Sys. Corp. Space Sys. Div.*, ASBCA No. 54774, 10-2 B.C.A. ¶ 34517 (July 22, 2010) (recognizing that a constructive change is compensable under the Changes clause “when a contractor performs work beyond the contract requirements, without a formal change order under the Changes clause, due either to an informal order from, or through the fault of, the government.”) (internal citations omitted).

²² See *Space Gateway Support, LLC*, ASBCA No. 55608, 55658, 13 BCA ¶35,232 (Jan. 29, 2013) (recognizing that the Contracting Officer must “make adjustments, if appropriate, in ‘affected’ contract terms other than ‘fixed fee’”).

provisions in multiple respects. First, whatever limits on fee are contained in Section B.4 apply only to the negotiated fees described in Section B.3 – Incentive, Milestone, and Award Fees. The Section B.4 circumstances that limit increases in the negotiated fee do not apply to the fixed fee provision of Section B.5. And here, MOX Services claims present entitlement to fixed fee.

Second, even if Section B.4 were somehow deemed to apply to Section B.5's fixed fee provision, the exceptions set forth in B.4 that recognize fee-bearing changes to the Total Project Cost ("TPC") apply here. Section B.4 recognizes that additional work scope that is sufficient to warrant a change in the Congressional baseline will result in a fee-bearing change to the TPC. Whether or not the Congressional baseline was changed in 2012, at that time NNSA recognized that the Project needed to be rebaselined, and NNSA directed MOX Services' to measure its progress according to the 2012 Rebaseline. Moreover, Section B.4 also recognized that certain project risks, such as those related to the Russian parallelism requirement, were not included in the calculation of Project costs, and thus were not within the Option 1 work scope. If such a risk materialized, the additional work scope necessarily would be fee-bearing under B.4 and the Changes clause.

c. NNSA Specifically Accepted Risks Related to the Russian Parallelism Requirement

In addition to actual and constructive changes cognizable generally under the Changes clause, the Contract makes special provisions for certain risk events that were not included in the Project costs, and for which NNSA took explicit responsibility.²³

Before Option 1 Russia was uneven in demonstrating its commitment to meeting the PMDA's requirements, thus there was a risk that DOE would have to slow MOX Services' performance in order to match it to Russia's progress. Acknowledging that risks related to the PMDA's Russian parallelism requirement would be "difficult or impossible to quantify," but could have "major" cost implications, the Project Execution Plan, which is incorporated into the Option 1 contract, excluded these risks from the scope of the Option 1 contract.²⁴ The Project Execution Plan then states that "NNSA will accept these risks and process a change to the project baseline should they occur."²⁵

The risks entailed in the Russian parallelism requirement materialized. Concerned that progress on the U.S. MFFF would get too far ahead of that on the Russian MFFF, NNSA refused MOX Services' repeated requests to conduct pre-Option 1 pilot procurements of

²³ Contract, Exhibit 11 at B.4.

²⁴ MOX Fuel Fabrication Facility, Project Execution Plan, 99-D-143, Revision 4, (April 2007) ("PEP") at 28. ("Exhibit 13"). The Project Execution Plan defines "outside of the project risk" to include, among others, "[r]isks related to the requirement for rough parallelism with the Russian program." *Id.*

²⁵ *Id.* at 28.

select process units. A stated purpose of these requested pilots was to generate cost and schedule information from prospective vendors on which to base the process unit cost and Project schedule estimates. Following the 2007 Baseline, when NNSA finally allowed MOX Services to conduct pilot procurements, the parties learned that the process unit estimates fell far short of the actual effort and costs demanded by this work.

Under the Contract's risk allocation, the additional process unit-related work was beyond the Option 1 scope-of-work. MOX Services is entitled to fee on this extra work.

d. NNSA Dictated the Method of Construction Performance

In addition to calling out the risks of Russian parallelism and others, the Contract specified the method of MFFF construction performance. Under this provision MOX Services effectively would serve as a construction manager for the Project, and would obtain the work principally through large fixed-price construction packages.²⁶ This strategy prohibited MOX Services from self-performing significant amounts of the construction.²⁷ Instead, the Contract required MOX Services to competitively procure fixed-price subcontracts for the construction work.²⁸

NNSA's directed performance strategy sought to reduce costs through competitive bidding among technically capable fixed-price subcontractors.²⁹ NNSA stood to benefit from the success of this strategy, and conversely, the Agency accepted the risk of its failure.³⁰ Accordingly, Option 1 excluded the risk of NNSA's performance strategy from the cost estimate.³¹

²⁶ Exhibit 2, Mod. 124, at H.7.

²⁷ Mod. 124, Exhibit 2 at §H.7. ("No construction work shall be awarded to the firm that designs the MOX Fuel Fabrication Facility or its subsidiaries or affiliates, except with the approval of the Secretary or his authorized representative. . . . Construction Management activities are not prohibited and may be performed by the prime contractor.").

²⁸ Exhibit 14, Mod. 152, at H.7 ("The Contractor shall not perform any construction with its own forces. All construction activities shall be procured on a competitive fixed-price basis to the maximum extent practicable.").

²⁹ See E-Mail from Carol Elliot, to Sue King, Subject, Construction Prohibition (Oct. 20, 2008, 2:54PM) ("Carol Elliot E-mail") ("Exhibit 15"); see also Exhibit 11 at I.5 (incorporating by reference FAR 52.244-2 and FAR 52.244-5, calling for competition in subcontracting and the Government's consent to subcontract); see generally July 26, 2002 Letter and attachment from James R. Bieschke, Contracting Officer, DOE, to Robert H. Ihde, President, Duke, Cogema, Stone and Webster regarding Exercise of Option 1 ("Exhibit 16") (listing construction objectives, including procurement of "all construction activities on a competitive fixed-price basis to the maximum extent practicable").

³⁰ A reviewing court will determine which party "assumed the risk" of the occurrence of an event that inhibits performance. *DeCarlo and Doll, Inc. v. Dilozir*, 45 Conn. App. 633, 643

In fact, in performance MOX Services discovered that potential subcontractors' capabilities to operate under the NRC's regulatory regime had atrophied, and had not recovered, from the downturn in nuclear construction following the Three Mile Island disaster. MOX Services found that truly nuclear-project-capable subcontractors now are in high demand and represent only a small percentage of the industry, and that the unprecedented nature of the Project made potential subcontractors leery of bidding on large fixed-price contracts. Combined, these forces have severely hampered MOX Services' ability to construct the Project in the manner envisioned by DOE at the start of Option 1. Many of these forces were identified in the MOX Services proposal, which expressly assumed that these potential challenges would not impact the Project cost or schedule.

When NNSA's performance strategy proved unworkable, to reduce the cost increase NNSA changed course and removed the prohibition on self-performance. By doing so, NNSA effectively admitted that its dictated performance strategy had failed. Accordingly, not only is NNSA responsible for any costs or schedule impacts associated with this changed strategy, the Agency also is obliged to pay fee on the associated additional work.

C. Outline Of Contract Changes

DOE and NNSA have strictly controlled the timing, performance and funding of the Project from the time the Contract was signed in 1999. Instead of directing the Project in the most efficient and cost effective manner, on many occasions DOE has based its Contract direction on political considerations that have added work to the Contract.

On multiple occasions, DOE has slowed down the Project so as not to get ahead of the Russian program. This impetus was reflected particularly in NNSA's refusal to allow MOX Services to interact with and gain information from potential process unit subcontractors. For diplomatic reasons DOE unquestionably could sacrifice efficacy of the estimating function in order to prevent the impression that the U.S. and Russian programs were no longer tied. But just as unquestionably, the Contract excepted the effects of such actions from the scope of Option 1, and recognized that MOX Services would earn additional fee for the out-of-scope work.

Also, the State of South Carolina agreed to accept weapons-grade plutonium at the Savannah River Site ("SRS") only on the condition that DOE implement a disposition strategy for removing it, preferably through the construction of the MFFF, which would create thousands of jobs in the State. By the time a major delay in the Russian MOX

(1997) ("Determining whether the non-occurrence of a particular event was or was not a basic assumption involves a judgment as to which party assumed the risk of its occurrence....In making such determinations, a court will look at all circumstances, including the terms of the contract.") (internal citations omitted).

³¹ Basis of Estimate, BCP # 05-011, (Feb. 3, 2006) ("BCP #05-011"). ("Exhibit 17") ("The estimate assumes an adequate number of suppliers, vendors and subcontractors with NQA-1 programs that have capacity and technical capabilities to support project schedule.").

program was resolved, the plutonium had been stored at the SRS for years. From South Carolina's perspective, the stalled Project meant that DOE had not held up its end of the bargain. Even though at that point the relevant designs were not sufficiently mature to support accurate estimating, in an attempt to make up for lost time DOE directed MOX Services to prepare the MFFF construction cost and schedule estimates. These prematurely developed estimates failed to fully account for the work that would be required to complete Option 1. Under well-established case law, where, as here, the government causes the estimates to fall short of reflecting the work actually required, the additional work is beyond the scope of the contract, and the contractor is entitled to fee on the added scope.

Further, instead of allowing MOX Services to select the construction performance strategy MOX Services judged best, NNSA directed MOX Services to subcontract all the construction work on a competitive fixed-price basis. NNSA presumed that competition would drive down subcontractors' bids and that the fixed-price nature of the subcontracts would control potential cost overruns. NNSA's strategy ultimately failed because of a lack of qualified and willing subcontractors, and had to be abandoned. NNSA's failed strategy increased costs significantly. Under the Changes clause MOX Services is entitled to fee on this additional work.

CB&I AREVA MOX Services, LLC.

Schedule 1.0

Claim Summary

	Incurring Claim Growth Through April 2013 ⁽¹⁾
Scope Changes	
Process Units Scope Change	\$ 705,645,643
Construction Strategy Change	109,468,108
MFFF Construction Change	439,643,850
Subtotal Scope Changes	\$ 1,254,757,601
Removal of Non-Claim Items	\$ (202,863,537) ⁽²⁾
Total Scope Changes	\$ 1,051,894,064
Claim Fee	10%
Claim Amount	\$ 105,189,406

Sources:

Schedule 1.01

Notes:

(1) The cost data in this proposal is based on PRISM cost processor data, which is reconciled to the MOX accounting system on a monthly basis. As part of the preparation of this Claim, MOX personnel reviewed the "Top Level Accruals" from MOX Accounting totaling \$444,438 as of April 30, 2013. These amounts are not recorded at the control account level and therefore not included in PRISM or this Claim.

(2) Adjustment includes costs for the following items:

Unclaimed Cost Growth - \$100.1M

Contract Modifications With Release Language - \$36.7M

Pre-2007 EAC Baseline Adjustment - \$66.1M

CB&I AREVA MOX Services, LLC.
Total Claim For Changes Detail

Schedule 1.01

	[A]	[B]	[C]	
Claim Category	Cost Growth	Claim Growth	Incurred Claim Growth Through April 2013 ⁽¹⁾	Support Schedule
Option 1 Contract				
Process Units Scope Change	\$ 1,367,192,210	\$ 1,324,966,109	\$ 705,645,643	Schedule 1.1
Construction Strategy Change	258,614,864	258,614,864	109,468,108	Schedule 1.1
MFFF Construction Change	1,199,866,793	1,198,566,862	439,643,850	Schedule 1.1
All Other	(40,744,966)	-	-	Schedule 1.1
Option 1 Total	\$ 2,784,928,901	\$ 2,782,147,835	\$ 1,254,757,601	
 Base Contract	 \$ 178,683,926	 \$ -	 \$ -	 Schedule 1.1
 MFFF Project Total	 \$ 2,963,612,827	 \$ 2,782,147,835	 \$ 1,254,757,601	
 <u>Cost Adjustments</u>				
Unclaimed Cost Growth		\$ (100,124,017)	\$ (100,124,017)	Schedule 1.3, 1.6, 1.7
Contract Modifications With Release Language		(55,199,317) ⁽²⁾	(36,660,965)	Schedule 1.4
Pre-2007 EAC Baseline Adjustment		(134,854,194)	(66,078,555)	Schedule 1.5
Total Cost Adjustments		\$ (290,177,528)	\$ (202,863,537)	
 Total Claim For Changes		 \$ 2,491,970,307	 \$ 1,051,894,064	

Notes:

(1) The cost data in this proposal is based on PRISM cost processor data, which is reconciled to the MOX accounting system on a monthly basis. As part of the preparation of this Claim, MOX personnel reviewed the "Top Level Accruals" from MOX Accounting totaling \$444,438 as of April 30, 2013. These amounts are not recorded at the control account level and therefore not included in PRISM or this Claim.

(2) The Sept. 2016 C16-003 Incentive Fee Certified Claim included a bottom line adjustment for Contract Modifications that overlapped with the Claim in the amount of \$57,768,678. These Contract Modifications added additional costs to the contract value, but did not include any associated fee. For purposes of this Claim, this adjustment has been removed.

CB&I AREVA MOX Services, LLC.
Claim Cost Growth Summary

Schedule 1.1

	[A]	[B]	[C] = B - A	[D]	[E]	
Claim Category	2007 Baseline	2012 Rebaseline with Addendum	Cost Growth	Claim Growth	Incurred Claim Growth Through April 2013	Support Schedule
Option 1 Contract						
Process Units Scope Change	\$ 1,150,921,514	\$ 2,518,113,724	\$ 1,367,192,210	\$ 1,324,966,109	\$ 705,645,643	Schedule 1.2
Construction Strategy Change	78,174,343	336,789,207	258,614,864	258,614,864	109,468,108	Schedule 1.2
MFFF Construction Change	1,095,548,855	2,295,415,649	1,199,866,793	1,198,566,862	439,643,850	Schedule 1.2
All Other	454,177,767	413,432,801	(40,744,966)	-	-	Schedule 1.2
Option 1 Total	\$ 2,778,822,480	\$ 5,563,751,381	\$ 2,784,928,901	\$ 2,782,147,835	\$ 1,254,757,601	
Base Contract	\$ 872,066,279	\$ 1,050,750,205	\$ 178,683,926	\$ -	\$ -	Schedule 1.2
MFFF Project Total	\$ 3,650,888,759	\$ 6,614,501,586	\$ 2,963,612,827	\$ 2,782,147,835	\$ 1,254,757,601	

CB&I AREVA MOX Services, LLC.
Claim Cost Growth Detail

Schedule 1.2

Claim Category	[A] 2007 Baseline	[B] 2012 Rebaseline with Addendum	[C] = B-A Cost Growth	[D] Claim Growth	[E] Incurred Claim Growth Through April 2013	Supporting Schedule
Option 1 Contract						
Process Units Scope Change						
Direct Process Unit	\$ 345,543,884	\$ 858,791,412	\$ 513,247,529	\$ 502,803,979	\$ 325,022,793	Schedule 3.02, 1.21
Hotel Load	799,014,425	1,612,646,690	813,632,265	781,849,714	361,644,231	Schedule 3.02, 1.21
QA - Process Units/Hotel Load	6,363,205	46,675,622	40,312,416	40,312,416	18,978,619	Schedule 3.02, 1.21
Process Units Subtotal	\$ 1,150,921,514	\$ 2,518,113,724	\$ 1,367,192,210	\$ 1,324,966,109	\$ 705,645,643	
Construction Strategy Change						
QA - Construction	\$ 16,659,849	\$ 122,203,946	\$ 105,544,098	\$ 105,544,098	\$ 48,802,163	Schedule 4.01, 1.214
Construction Management	61,514,495	214,585,261	153,070,766	153,070,766	60,665,945	Schedule 4.01, 1.22
Construction Subtotal	\$ 78,174,343	\$ 336,789,207	\$ 258,614,864	\$ 258,614,864	\$ 109,468,108	
MFFF Construction Change						
Installation	\$ 817,738,444	\$ 1,602,357,424	\$ 784,618,980	\$ 783,349,619	\$ 221,226,150	Schedule 5.01, 1.23
Materials	244,861,751	601,793,073	356,931,323	356,920,702	160,121,159	Schedule 5.01, 1.23
MFFF Construction Title III Engineering	32,948,661	91,265,151	58,316,491	58,296,541	58,296,541	Schedule 5.01, 1.23
MFFF Construction Subtotal	\$ 1,095,548,855	\$ 2,295,415,649	\$ 1,199,866,793	\$ 1,198,566,862	\$ 439,643,850	
All Other ⁽¹⁾	454,177,767	413,432,801	(40,744,966)	-	-	Schedule 6.11
Option 1 Contract Subtotal	\$ 2,778,822,480	\$ 5,563,751,381	\$ 2,784,928,901	\$ 2,782,147,835	\$ 1,254,757,601	
Base Contract	\$ 872,066,279	\$ 1,050,750,205	\$ 178,683,926	\$ -	\$ -	Schedule 6.11
MFFF Project Total	\$ 3,650,888,759	\$ 6,614,501,586	\$ 2,963,612,827	\$ 2,782,147,835	\$ 1,254,757,601	

Sources:

[A] May 2007 PRISM Data adjusted for budget transfers between July 2007 and September 2012

[B] 2012 contract proposal value as stated in December 2012 PRISM data and adjusted for 2012 Rebaseline Addendums

[C] Calculated

[D],[E] Support schedules as referenced

Notes:

(1) Option 1 cost accounts which are not categorized as Process Unit, Construction, or MFFF Construction related.

CB&I AREVA MOX Services, LLC.
Process Unit Scope Change - Claim Cost Growth Detail

Category Description	[A]	[B]	[C] = B - A	[D]	[E]	Support Schedule
	2007 Baseline	2012 Rebaseline with Addendum	Cost Growth	Total Claim Growth	Incurred Claim Growth Through April 2013	
Process Unit Fabrication	\$ 234,510,584	\$ 589,956,954	\$ 355,446,370	\$ 345,578,075	\$ 248,271,175	Schedule 3.02, 1.211
Process Unit Assembly, Materials, and Supervision	83,887,205	185,032,060	101,144,856	100,569,601	66,010,765	Schedule 3.02, 1.212
Process Unit Title III Engineering	27,146,095	83,802,398	56,656,303	56,656,303	10,740,852	Schedule 3.02, 1.213
Subtotal - Direct Process Unit	\$ 345,543,884	\$ 858,791,412	\$ 513,247,529	\$ 502,803,979	\$ 325,022,793	
Quality Assurance Related to Process Units	\$ 4,049,445	\$ 29,703,639	\$ 25,654,194	\$ 25,654,194	\$ 12,200,541	Schedule 3.02, 1.214
Quality Assurance Related to Hotel Load	2,313,760	16,971,983	14,658,222	\$ 14,658,222	\$ 6,778,078	Schedule 3.02, 1.214
Subtotal - Quality Assurance	\$ 6,363,205	\$ 46,675,622	\$ 40,312,416	\$ 40,312,416	\$ 18,978,619	
Total Direct Process Unit and Quality Assurance	\$ 351,907,089	\$ 905,467,034	\$ 553,559,945	\$ 543,116,396	\$ 344,001,411	
Hotel Load	\$ 799,014,425	\$ 1,612,646,690	\$ 813,632,265	\$ 781,849,714	\$ 361,644,231	Schedule 3.02, 1.215
Process Units Total	\$ 1,150,921,514	\$ 2,518,113,724	\$ 1,367,192,210	\$ 1,324,966,109	\$ 705,645,643	

Sources:

[A] May 2007 PRISM Data adjusted for budget transfers between July 2007 and September 2012

[B] 2012 contract proposal value as stated in December 2012 PRISM data and adjusted for 2012 Rebaseline Addendums

[C] Calculated

[D],[E] Support schedules as referenced

CB&I AREVA MOX Services, LLC.

Schedule 1.211

Process Unit Fabrication Incurred Claim Growth Through April 2013 - By Cost Account

Cost Account	Cost Account Description	[A] 2007 Baseline Timephased Through April 2013	[B] Actual Costs Through April 2013	[C] = B - A Incurred Claim Growth Through April 2013
1701.8701	KCB - Homogenization - Sampling	\$ 1,038,321	\$ 5,792,075	\$ 4,753,753
1701.8702	KCC - PuO2 Decanning	1,033,042	4,468,549	3,435,506
1701.8703	KDA - PUO2 Decanning	1,947,312	16,766,598	14,819,285
1701.8704	KDM - Pre-Polishing Milling	5,079,795	25,362,481	20,282,687
1701.8705	KDR - Recanning	1,020,566	186,191	(834,375)
1701.8706	KPA GB 4010	539,239	2,176,140	1,636,901
1701.8777	KPG - Sampling Automatic	1,234,474	5,209,474	3,975,000
1701.8795		(1,495,897)	-	1,495,897
1702.8707	KCB 5000 Manufacturing	360,847	477,760	116,912
1702.8712	VDR - Filter Dismantling	949,350	30,701	(918,649)
1702.8713	VDU - Maintenance & Mechanical Dismantling	614,721	19,989	(594,732)
1703.8715	DCM - PuO2 3013 Storage	1,092,794	1,815,690	722,895
1703.8716	DCP - PuO2 Receiving	3,469,452	3,588,509	119,057
1703.8717	KDA - PUO2 Decanning (EQ - 6000 Density Measurement)	343,492	803,004	459,512
1704.8720	SDK - Rod Inspection and Sorting	1,579,044	2,447,411	868,367
1704.8721	SEK - Helium Leak Test	391,399	1,650,320	1,258,920
1705.8722	GMK - Rod Tray Loading	527,254	1,042,768	515,513
1705.8723	SCE - Rod Scanning	1,312,251	3,087,221	1,774,970
1705.8724	SMK - Rod Tray Handling	1,134,021	1,974,422	840,401
1705.8725	STK - Rod Storage	1,000,318	4,026,511	3,026,193
1705.8726	SXE - X Ray Inspection	1,125,130	515,830	(609,300)
1705.8727	TAS - Assembly Handling and Storage	597,605	996,323	398,718
1705.8728	TCK - Assembly Dry Cleaning	194,713	433,952	239,240
1705.8729	TCL - Assembly Final Inspection	1,078,396	1,048,771	(29,625)
1705.8730	TGJ - Reserve Pit	1,079,178	348,943	(730,235)
1705.8731	TCP - Assembly Dismensional Inspection	863,693	1,993,120	1,129,426
1705.8732	TGM - Assembly Mockup Loading	1,960,205	2,366,027	405,822
1705.8733	TGV - Assembly Mounting	698,371	538,737	(159,634)
1706.8734	PSE - Green Pellet Storage	1,607,959	7,337,492	5,729,533
1706.8735	PSF - Sintering Pellet Storage	1,642,408	7,148,865	5,506,457
1706.8736	PSI - Scrap Pellet Storage	1,590,452	8,085,365	6,494,913
1706.8737	PSJ - Ground & Sorted Pellet Storage	1,617,505	7,950,893	6,333,387
1707.8738	Lab Equip - LRD/LPG/LBT/LAC/KLN/KLL/KLK/KLH	2,741,957	2,522,651	(219,306)
1707.8739	Lab Equip - LME/LAU/FLT	1,361,407	2,311,311	949,905
1707.8740	Lab Equip - LSR/LCP/KLJ	3,551,365	6,523,819	2,972,454

CB&I AREVA MOX Services, LLC.

Schedule 1.211

Process Unit Fabrication Incurred Claim Growth Through April 2013 - By Cost Account

Cost Account	Cost Account Description	[A] 2007 Baseline Timephased Through April 2013	[B] Actual Costs Through April 2013	[C] = B - A Incurred Claim Growth Through April 2013
1707.8741	Lab Equip - LPS/LET/LER/LDS/KLM/KLF/KLB/KLC/KLD	3,665,248	3,208,463	(456,785)
1707.8742	Lab Equip - KLO/KLI/KLG/KLA/KLE	3,832,528	2,375,376	(1,457,152)
1707.8743	Lab Equip - LSG/LLI	224,960	18,404	(206,556)
1707.8744	Lab Equip - LFX	756,466	415,884	(340,582)
1708.8745	DCE - PUO2 Buffer Storage	1,166,485	3,677,713	2,511,228
1708.8746	GDE - Rod Decladding	560,103	3,072,013	2,511,909
1708.8747	GME - Rod Cladding and Decontamination	4,771,528	22,990,148	18,218,620
1708.8748	PAD - Preplanning	318,881	2,106,833	1,787,952
1708.8749	PAR - Preplanning	298,090	2,024,815	1,726,725
1708.8750	PML - Pellet Handling	3,664,361	16,485,973	12,821,611
1708.8751	PQE - Quality Control & Manual Sorting	1,771,833	3,575,934	1,804,102
1708.8752	PRE - Pellet Grinding	1,524,057	6,149,924	4,625,867
1708.8753	PRF - Pellet Grinding	1,524,057	5,270,768	3,746,712
1708.8754	PTE - Pellet Inspection & Sorting	656,344	4,997,897	4,341,553
1708.8755	PTF - Pellet Inspection & Sorting	653,252	4,410,641	3,757,389
1709.8756	DDP - UO2 Drum Emptying	677,252	2,330,920	1,653,667
1709.8757	LCT - Test Line (part of laboratory)	1,404,212	1,842,022	437,811
1709.8758	NBX - Primary Blend Ball Milling	751,037	2,900,865	2,149,828
1709.8759	NBY - Scrap Ball Milling	751,037	2,139,273	1,388,236
1709.8760	NCR - Scrap Processing	2,842,096	5,040,104	2,198,009
1709.8761	NDD - PUO2 Can Receiving and Emptying	847,318	2,791,209	1,943,891
1709.8762	NDP - Primary Dosing	2,251,156	6,986,495	4,735,339
1709.8763	NDS - Final Dosing	2,749,556	7,862,917	5,113,361
1709.8764	NTM - Jar Storage and Handling	3,605,539	16,721,944	13,116,406
1709.8765	NXR - Powder Auxiliary	1,085,659	4,386,435	3,300,776
1710.8766	NPG - Homogenization & Pelletizing	2,102,708	13,023,870	10,921,162
1710.8767	NPH - Homogenization & Pelletizing	2,073,324	11,347,524	9,274,200
1710.8768	NPI - Homogenization & Pelletizing	2,079,383	2,312,932	233,549
1711.8769	KLA - Precipitation - Filtration - Oxidation	1,258,906	6,670,047	5,411,141
1711.8770	KCB GB1000 - Homogenization - Sampling	517,622	2,395,603	1,877,981
1711.8771	KDA - PUO2 Decanning	217,395	666,810	449,415
1711.8772	KDB - Dissolution	1,363,395	4,877,787	3,514,392
1711.8773	KDD - Dissolution of Chlorinated Feed	2,557,741	14,343,114	11,785,373
1711.8774	KDM - Pre-Polishing Milling (GB6400/7400)	422,354	782,326	359,972
1711.8775	KPA GB4000	1,035,316	2,929,951	1,894,635

CB&I AREVA MOX Services, LLC.

Schedule 1.211

Process Unit Fabrication Incurred Claim Growth Through April 2013 - By Cost Account

Cost Account	Cost Account Description	[A] 2007 Baseline Timephased Through April 2013	[B] Actual Costs Through April 2013	[C] = B - A Incurred Claim Growth Through April 2013
1711.8776	KPB GB1000	365,652	1,190,624	824,971
1711.8777	KPG - Sampling Automatic	-	53,300	53,300
1711.8778	LLP - Pneumatic Transfer (33mm, PUO2 cans) Equipment	1,243,024	5,044,580	3,801,556
1711.8779	LTP - Pneumatic Transfer (76mm, PUO2 cans) Equipment	580,029	2,713,161	2,133,132
1711.8780	NTP - Pneumatic Transfer (133mm, PUO2 cans) Equipment	1,045,377	4,255,313	3,209,936
1712.8781	NPP - Additives Preparation	767,836	-	(767,836)
1712.8782	PFE/PFF - Sintering Furnace	13,393,642	38,062,654	24,669,011
1712.8783	TXE - Assembly Packaging	564,381	1,182,520	618,139
1712.8784	DRS - UO2 Receiving and Storage	81,935	-	(81,935)
1712.8786	PFF - Sintering Furnace	2	-	(2)
1713.8790	Process Unit Support	1,352,516	3,181,700	1,829,184
1714.8708	KCD - Oxalic Mother Liquors Recovery Unit	460,516	265,792	(194,724)
1714.8709	KPA (GB2000, 2010, 3000, 8000, 8510) Purification Cycle	1,049,826	1,586,515	536,689
1714.8710	KPC - Nitric Acid Recovery Liquid Ring Pump GB	491,217	353,750	(137,467)
1714.8711	KWD - Aqueous Waste Reception	676,401	575,093	(101,308)
1714.8714	KPB (GB2000) Solvent Recovery Unit	218,440	257,705	39,266
1715.8716	DCP - PuO2 Receiving	-	157,000	157,000
1715.8718	VDQ Waste Storage	1,647,696	639	(1,647,056)
1715.8719	VDT Waste Nuclear Count - Drum Hdling & NDA P	477,709	966,413	488,705
1745.4530	MP Sintering Furnances	608,597	-	(608,597)
Total		\$ 125,888,134	\$ 384,027,604	\$ 258,139,470
Adjustments				
	Process Unit Fabrication - Deferment & Associated Costs			\$ 9,846,767
	Process Unit Fabrication - Non-DCS Costs			21,528
	Total Incurred Claim Growth Through April 2013			\$ 248,271,175

Sources:

[A] Schedule 7.21

[B] Schedule 7.11

[C] Calculated

Adjustments - Schedule 3.1

CB&I AREVA MOX Services, LLC.

Schedule 1.212

Process Unit Assembly, Materials, and Supervision Incurred Claim Growth Through April 2013 - By Cost Account

Cost Account	Cost Account Description	[A] 2007 Baseline Timephased Through April 2013	[B] Actual Costs Through April 2013	[C] = B - A Incurred Claim Growth Through April 2013
1716.8791	Assembly BOAs Accounts	\$ 5,705,899	\$ 24,961,298	\$ 19,255,398
1716.8795	Long Lead Procurements	8,616,310	39,544,542	30,928,232
1716.8796	ATG Spares Procurements	2,590,248	593,236	(1,997,012)
1717.8792	Self-Perform Suspense Accounts	170,719	488,785	318,065
1717.8793	Design Modifications	-	369,905	369,905
1717.8797	Unexpected Outsource Costs	-	366,406	366,406
1717.8798	Duty and Shipping Costs	-	44,916	44,916
1717.8799	REA Exposure	-	(0)	(0)
1717.87MA	Maintenance Program, Layup/In-Storage	-	333,456	333,456
Subtotal		\$ 17,083,176	\$ 66,702,543	\$ 49,619,367
1600.8601	Management / Admin	\$ 2,187,330	\$ 6,851,126	\$ 4,663,796
1600.8602	Project Controls	2,494,232	6,848,484	4,354,253
1600.8603	QA / QC	102,309	88,126	(14,183)
1601.8611	Business Travel	2,966,760	4,682,292	1,715,532
1602.8621	Supervision / Admin	1,709,083	4,285,194	2,576,111
1603.8631	Supervision / Admin	9,198,835	5,718,020	(3,480,816)
1603.8632	Job Living Expense	-	208,184	208,184
1603.8641	Management / Admin	(216,717)	\$ -	216,717
1604.8641	Team Center Initiative	216,717	313,719	97,002
1605.8645	CA - NRC/CGIE - PUDC Support	-	2,150,936	2,150,936
1623.8785	Process Assembly Facilities	23,075,099	27,554,220	4,479,121
Subtotal		\$ 41,733,648	\$ 58,700,301	\$ 16,966,653
Total		\$ 58,816,825	\$ 125,402,844	\$ 66,586,020
Adjustments				
Process Unit Assembly, Materials, and Supervision - Non-DCS Costs				\$ 575,255
Total Incurred Claim Growth Through April 2013				\$ 66,010,765

Sources:

[A] Schedule 7.21

[B] Schedule 7.11

[C] Calculated

Adjustments - Schedule 3.2

Schedule 1.213

CB&I AREVA MOX Services, LLC.

Process Unit Title III Engineering Incurred Claim Growth Through April 2013 - By Cost Account

Cost Account	Cost Account Description	[A]	[B]	[C] = B - A
		2007 Baseline Timephased Through April 2013	Actual Costs Through April 2013	Incurred Claim Growth Through April 2013
1004.8043	PUDC Site Construction Support	\$ 4,705,057	\$ 23,563,925	\$ 18,858,868
1005.8056	PUDC Startup Support	3,805,198	1,541	(3,803,656)
1003.8033	PUDC Procurement & Fabrication Support	1,358,084	201,146	(1,156,938)
1004.8045	Software	6,412,495	3,255,073	(3,157,422)
Total		\$ 16,280,833	\$ 27,021,686	\$ 10,740,852 ⁽¹⁾

Sources:

[A] Schedule 7.21

[B] Schedule 7.11

[C] Calculated

Notes:

(1) Because there are no Process Unit Title III Engineering Non-DCS costs, the total cost growth through April 2013 is equal to the total claim growth through April 2013.

CB&I AREVA MOX Services, LLC.

Schedule 1.214

Quality Assurance (QA) Incurred Claim Growth Through April 2013

		Cost Amount	Support Schedule
[A]	2007 Baseline Timephased Through April 2013	\$ 10,970,909	Schedule 7.2
[B]	Actual Costs Through April 2013	78,751,690	Schedule 7.1
[C] = B - A	Incurred Claim Growth Through April 2013	<u>\$ 67,780,782</u>	
	Estimated Percentage of QA Work by Category ⁽¹⁾		
[D]	Process Unit Related	18%	Schedule 4.11
[E]	Construction Effort Related	72%	Schedule 4.11
[F]	Hotel Load Related	10%	Schedule 4.11
[G] = D + E + F	Total Percentage	<u>100%</u>	
[H] = C * D	Quality Assurance Related to Process Units	\$ 12,200,541	
[I] = C * E	Quality Assurance Related to Construction Effort	48,802,163	
[J] = C * F	Quality Assurance Related to Hotel Load	6,778,078	
[K] = H + I + J	Incurred Claim Growth Through April 2013	<u>\$ 67,780,782</u>	

Notes:

(1) Estimated Percentage of QA Work by Category amounts are rounded to the nearest whole percentage from the percentages identified in Schedule 4.11.

CB&I AREVA MOX Services, LLC.

Hotel Load by Management Area - Incurred Claim Growth Through April 2013

Management Area	Management Area Description	[A]	[B]	[C] = B - A	[D]	[E] = C+D
		Incurred Through April 2013				
		2007 Baseline	Actual Costs	Cost Growth	Adjustment For Non-Claim Items	Claim Growth
06	Project Management	\$ 113,983,694	\$ 304,683,453	\$ 190,699,759	\$ -	\$ 190,699,759
10	Title III Engineering	69,574,718	157,017,492	87,442,774	-	87,442,774
11	Regulatory Affairs	67,969,649	53,704,537	(14,265,112)	14,265,112 ⁽¹⁾	-
18	Temporary Facilities & Services	40,666,697	108,655,939	67,989,242	-	67,989,242
20	Cold Startup	2,622,004	14,743,607	12,121,603	-	12,121,603
21	(OPC) Operations Preparation	49,154,695	54,210,693	5,055,999	(5,055,999) ⁽²⁾	-
22	ES&H Program Management	6,725,391	13,912,806	7,187,415	-	7,187,415
Subtotal		\$ 350,696,848	\$ 706,928,527	\$ 356,231,679	\$ 9,209,114	\$ 365,440,792
Adjustments						
Adjustment: Less Non-DCS Costs					3,796,561	3,796,561
Total					\$ 5,412,553	\$ 361,644,231

Sources:

[A] Schedule 7.21

[B] Schedule 7.11

[C] Calculated

[D] Zero except for MA 11 and MA 21, which are excluded from the claim

[E] Calculated

Adjustment - Schedule 3.43 for Non-DCS Costs

Notes:

(1) Management Area 11 - Regulatory Affairs cost growth is excluded from this Claim because a significant portion of these costs are borne directly by or passed through to the DOE.

(2) Management Area 21 - (OPC) Operations Preparation cost growth is excluded from this Claim because the cost growth does not exceed the amount of costs incorporated into the contract under Contract Modification 162 for unexercised scope.

CB&I AREVA MOX Services, LLC.

Schedule 1.22

Construction Management Incurred Claim Growth Through April 2013 - By Cost Account

Cost Account	Cost Account Description	[A]	[B]	[C] = B - A
		2007 Baseline Timephased Through April 2013	Actual Costs Through April 2013	Incurred Claim Growth Through April 2013
1504.8541	Supervision / Admin	\$ 9,341,691	\$ 33,083,333	\$ 23,741,642
1500.8501	Management / Admin	10,478,672	30,382,305	19,903,633
1500.8502	Project Controls	5,129,142	17,556,498	12,427,356
1505.8551	Supervision / Admin	4,342	3,413,786	3,409,444
1500.8506	Business	639,708	2,413,477	1,773,769
1501.8512	Temporary Assignments	11,085	237,576	226,491
1504.8512	Temporary Assignments	-	(18)	(18)
1501.8511	Business Travel	314,190	176,685	(137,505)
1500.8503	Quality Assurance	593,338	480,319	(113,019)
1500.8504	ES&H	1,257,428	691,580	(565,848)
Total Construction Management		\$ 27,769,596	\$ 88,435,542	\$ 60,665,945

Sources:

[A] Schedule 7.21

[B] Schedule 7.11

[C] Calculated

CB&I AREVA MOX Services, LLC.

Schedule 1.23

MFFF Construction Change Incurred Claim Growth Through April 2013 - By Cost Account

Cost Account	Functional Area Descriptions	Cost Account Description	[A]	[B]	[C] = B - A
			2007 Baseline Timephased Through April 2013	Actual Costs Through April 2013	Incurred Claim Growth Through April 2013
1721.2101	Site Preparation	Site Preparation	\$ 29,051,171	\$ 29,493,071	\$ 441,900
1722.2201	Roads & Parking	Roads & Parking	994,902	1,454,136	459,234
1722.2202	Roads & Parking	F" Road"	4,236,110	3,390,871	(845,239)
1723.2301	Yard Structures	Yard Structures	1,193,201	2,222,750	1,029,549
1724.2401	Underground Utilities	Underground Utilities	5,802,507	8,221,762	2,419,255
1725.2501	Yard Fire Protection	Yard Fire Protection	1,274,436	2,003,706	729,269
1726.2601	Chillers	Chillers	2,145,289	168,905	(1,976,384)
1727.2701	Site Security / PIDAS	Site Security and Perimeter Intrusion Detection and Assessment Syste	18,120,824	4,990,769	(13,130,055)
1728.2801	Yard Electrical & Lighting	Yard Electrical & Lighting	3,478,048	4,008,621	530,572
1729.2901	Landscaping	Landscaping	235,212	290,534	55,322
1731.3150	Administration Building (BAD)	Administration Building	4,379,570	11,049,587	6,670,017
1732.3250	Receiving Warehouse Building	Receiving Warehouse Building	1,257,501	-	(1,257,501)
1732.3550	Receiving Warehouse Building		1	-	(1)
1733.3350	Secured Warehouse Building	Secured Warehouse Building	2,022,912	2,809,258	786,347
1734.3450	Tech Support & Access Control Bldg.	Tech Support & Access Control Building	3,827,363	20,086,434	16,259,071
1735.3550	Standby Diesel Generator Bldg.	Standby Diesel Generator Building	1,918,430	-	(1,918,430)
1736.3652	Emergency Diesel Generator Bldg.	Civil / Structural / Architectural	662,847	-	(662,847)
1736.3653	Emergency Diesel Generator Bldg.	Mechanical / Piping	815,741	668,132	(147,609)
1736.3654	Emergency Diesel Generator Bldg.	Electrical	1,299,055	814,380	(484,675)
1736.3655	Emergency Diesel Generator Bldg.	I&C	207,600	16,056	(191,544)
1736.3656	Emergency Diesel Generator Bldg.	Emerg.Diesel Gen.System/Equipment	4,185,957	5,190,768	1,004,811
1737.3751	Reagents Process Building	Design	751,537	3,187,949	2,436,412
1737.3752	Reagents Process Building	Civil / Structural / Architectural	994,707	221,437	(773,270)
1737.3753	Reagents Process Building	Mechanical / Piping	4,071,511	1,290,140	(2,781,372)
1737.3754	Reagents Process Building	Electrical	1,897,851	14,655	(1,883,196)
1737.3755	Reagents Process Building	I&C	2,814,988	16,332	(2,798,656)
1737.3756	Reagents Process Building	Reagent Systems Equipment / Piping	442,366	652,625	210,259
1741.4100	MOX Process Area Level 1	Building Structure	25,075,303	46,536,781	21,461,477
1741.4110	MOX Process Area Level 1	Architectural Features	690,641	4,221,793	3,531,152
1741.4120	MOX Process Area Level 1	HVAC	2,760,836	15,113,089	12,352,253
1741.4130	MOX Process Area Level 1	MOX Processing Area (BMP) – MOX Processing Area – Level 1 – Fire Pro	2,810,778	1,259,958	(1,550,820)
1741.4140	MOX Process Area Level 1	Utility Equipment & Piping	2,401,018	2,083,905	(317,113)
1741.4150	MOX Process Area Level 1	Process Piping	7,659,588	3,957,065	(3,702,523)
1741.4170	MOX Process Area Level 1	Other Equipment	4,248,054	419,664	(3,828,390)
1741.4180	MOX Process Area Level 1	Electrical	6,823,201	6,287,985	(535,217)
1741.4190	MOX Process Area Level 1	Instrumentation	7,039,979	-	(7,039,979)
1742.4200	MOX Process Area Level 2	Building Structure	12,223,489	35,579,165	23,355,676
1742.4210	MOX Process Area Level 2	Architectural Features	(102,711)	2,285,101	2,387,812
1742.4220	MOX Process Area Level 2	HVAC	4,100,227	6,745,495	2,645,268
1742.4230	MOX Process Area Level 2	MOX Processing Area (BMP) – MOX Processing Area – Level 2 – Fire Pro	3,232,453	538,542	(2,693,911)
1742.4240	MOX Process Area Level 2	Utility Equipment & Piping	655,294	42,641	(612,653)
1742.4250	MOX Process Area Level 2	Process Piping	4,279,013	1,475,072	(2,803,942)

CB&I AREVA MOX Services, LLC.

Schedule 1.23

MFFF Construction Change Incurred Claim Growth Through April 2013 - By Cost Account

Cost Account	Functional Area Descriptions	Cost Account Description	[A]	[B]	[C] = B - A
			2007 Baseline Timephased Through April 2013	Actual Costs Through April 2013	Incurred Claim Growth Through April 2013
1742.4270	MOX Process Area Level 2	Other Equipment	1,317,691	2,348	(1,315,344)
1742.4280	MOX Process Area Level 2	Electrical	8,005,404	5,752,174	(2,253,230)
1742.4290	MOX Process Area Level 2	Instrumentation	4,137,499	57,250	(4,080,249)
1742.4600	MOX Process Area Level 2		(90)	-	90
1743.4300	MOX Process Area Level 3	Building Structure	-	24,464,509	24,464,509
1743.4310	MOX Process Area Level 3	Architectural Features	115,800	467,206	351,407
1743.4320	MOX Process Area Level 3	HVAC	8,477,902	3,905,774	(4,572,128)
1743.4330	MOX Process Area Level 3	MOX Processing Area (BMP) – MOX Processing Area – Level 3 – Fire Pro	3,440,202	596,811	(2,843,390)
1743.4340	MOX Process Area Level 3	Utility Equipment & Piping	943,265	104,868	(838,397)
1743.4350	MOX Process Area Level 3	Process Piping	7,682,539	125,490	(7,557,049)
1743.4370	MOX Process Area Level 3	Other Equipment	61,221	-	(61,221)
1743.4380	MOX Process Area Level 3	Electrical	7,900,123	2,679,780	(5,220,343)
1743.4390	MOX Process Area Level 3	Instrumentation	9,769,407	8,499,802	(1,269,605)
1744.4400	MOX Process Area Roof/Other	Building Structure	449,730	7,585,496	7,135,766
1744.4410	MOX Process Area Roof/Other	Architectural Features	42,488	-	(42,488)
1744.4420	MOX Process Area Roof/Other	HVAC	189,739	-	(189,739)
1744.4430	MOX Process Area Roof/Other	MOX Processing Area (BMP) – MOX Processing Area – Level 4 – Fire Pr	134,190	-	(134,190)
1744.4440	MOX Process Area Roof/Other	Utility Equipment & Piping	312,353	-	(312,353)
1744.4480	MOX Process Area Roof/Other	Electrical	42,171	-	(42,171)
1744.4490	MOX Process Area Roof/Other	Instrumentation	(21,337)	-	21,337
1746.4600	MOX Process Area Equipment Installation	Fuel Assembly / Rods	2,629,673	431,771	(2,197,902)
1746.4610	MOX Process Area Equipment Installation	Powder & Pellets	9,792,024	346,389	(9,445,635)
1746.4620	MOX Process Area Equipment Installation	Furnaces & Pellet Storage	2,141,837	682,492	(1,459,345)
1746.4630	MOX Process Area Equipment Installation	PuO2 Receiving, Storage & Decanning	1,843,916	-	(1,843,916)
1746.4640	MOX Process Area Equipment Installation	Labs & Testing	19,438,443	-	(19,438,443)
1751.5100	AP Process Area Level 1	Building Structure	11,053,644	21,326,656	10,273,011
1751.5110	AP Process Area Level 1	Architectural Features	110,194	2,233,781	2,123,587
1751.5120	AP Process Area Level 1	HVAC	1,228,841	5,147,721	3,918,880
1751.5130	AP Process Area Level 1	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 1 –	669,689	633,388	(36,301)
1751.5140	AP Process Area Level 1	Utility Equipment & Piping	1,759,387	1,967,341	207,954
1751.5150	AP Process Area Level 1	Process Piping & Equipment	11,181,867	30,247,972	19,066,105
1751.5170	AP Process Area Level 1	Other Equipment	535,955	418,613	(117,342)
1751.5180	AP Process Area Level 1	Electrical	1,180,596	1,680,249	499,653
1751.5190	AP Process Area Level 1	Instrumentation	1,549,407	-	(1,549,407)
1752.5200	AP Process Area Level 2	Building Structure	2,859,375	9,451,743	6,592,369
1752.5210	AP Process Area Level 2	Architectural Features	(6,259)	396,309	402,568
1752.5220	AP Process Area Level 2	HVAC	1,651,583	1,432,522	(219,062)
1752.5230	AP Process Area Level 2	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 2 –	414,511	259,408	(155,103)
1752.5240	AP Process Area Level 2	Utility Equipment & Piping	428,957	668,407	239,450
1752.5250	AP Process Area Level 2	Process Piping & Equipment	12,048,988	44,598,022	32,549,034
1752.5270	AP Process Area Level 2	Other Equipment	933,780	(0)	(933,780)
1752.5280	AP Process Area Level 2	Electrical	2,294,727	2,166,920	(127,807)

CB&I AREVA MOX Services, LLC.

Schedule 1.23

MFFF Construction Change Incurred Claim Growth Through April 2013 - By Cost Account

Cost Account	Functional Area Descriptions	Cost Account Description	[A]	[B]	[C] = B - A
			2007 Baseline Timephased Through April 2013	Actual Costs Through April 2013	Incurred Claim Growth Through April 2013
1752.5290	AP Process Area Level 2	Instrumentation	1,855,993	54,546	(1,801,446)
1753.5300	AP Process Area Level 3	Building Structure	3,780,792	18,296,116	14,515,325
1753.5310	AP Process Area Level 3	Architectural Features	(4,231)	22,249	26,480
1753.5320	AP Process Area Level 3	HVAC	1,526,032	849,115	(676,918)
1753.5330	AP Process Area Level 3	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 3 –	431,129	233,613	(197,516)
1753.5340	AP Process Area Level 3	Utility Equipment & Piping	306,358	240,602	(65,756)
1753.5350	AP Process Area Level 3	Process Piping & Equipment	6,641,633	6,482,963	(158,670)
1753.5370	AP Process Area Level 3	Other Equipment	3,296	-	(3,296)
1753.5380	AP Process Area Level 3	Electrical	4,341,974	1,533,291	(2,808,682)
1753.5390	AP Process Area Level 3	Instrumentation	2,214,603	195,278	(2,019,326)
1754.5400	AP Process Area Level 4	Building Structure	-	5,806,522	5,806,522
1754.5410	AP Process Area Level 4	Architectural Features	14,887	29,330	14,443
1754.5420	AP Process Area Level 4	HVAC	1,554,135	245,973	(1,308,162)
1754.5430	AP Process Area Level 4	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 4 –	529,871	72,549	(457,322)
1754.5440	AP Process Area Level 4	Utility Equipment & Piping	810,086	1,166,004	355,918
1754.5450	AP Process Area Level 4	Process Piping & Equipment	5,512,918	1,225,323	(4,287,595)
1754.5470	AP Process Area Level 4	Other Equipment	314,170	-	(314,170)
1754.5480	AP Process Area Level 4	Electrical	2,540,700	645,285	(1,895,415)
1754.5490	AP Process Area Level 4	Instrumentation	3,909,718	-	(3,909,718)
1754.5540	AP Process Area Level 4		1,198	-	(1,198)
1755.5500	AP Process Area Level 5	Building Structure	-	6,397,319	6,397,319
1755.5510	AP Process Area Level 5	Architectural Features	70,162	-	(70,162)
1755.5520	AP Process Area Level 5	HVAC	1,736,153	717,606	(1,018,547)
1755.5530	AP Process Area Level 5	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 5 –	887,719	1,851	(885,868)
1755.5540	AP Process Area Level 5	Utility Equipment & Piping	1,200,078	1,537,188	337,109
1755.5550	AP Process Area Level 5	Process Piping & Equipment	6,603,602	306,969	(6,296,633)
1755.5570	AP Process Area Level 5	Other Equipment	189,673	-	(189,673)
1755.5580	AP Process Area Level 5	Electrical	1,988,026	421,620	(1,566,406)
1755.5590	AP Process Area Level 5	Instrumentation	7,150,722	7,096,228	(54,495)
1756.5600	AP Process Area Roof/Other	Building Structure	3,309,607	2,619,067	(690,540)
1756.5670	AP Process Area Roof/Other	Other Equipment	2,055,497	-	(2,055,497)
1757.5730	AP Process Area Unit Groups	PAF	-	35,452	35,452
1758.5810	AP Process Area Equip Installation	Mechanical Systems	6,732,109	1,300	(6,730,809)
1758.5850	AP Process Area Equip Installation	Chemical Systems	1,309,046	-	(1,309,046)
1761.6100	S&R Area Level 1	Building Structure	10,444,648	21,621,923	11,177,275
1761.6110	S&R Area Level 1	Architectural Features	1,391,414	2,857,370	1,465,955
1761.6120	S&R Area Level 1	HVAC	770,603	234,489	(536,114)
1761.6130	S&R Area Level 1	Shipping and Receiving Area (BSR) – Shipping and Receiving Area – Le	862,047	693,883	(168,164)
1761.6140	S&R Area Level 1	Utility Equipment & Piping	755,258	879,153	123,894
1761.6150	S&R Area Level 1	Process Piping	177,546	774,307	596,762
1761.6170	S&R Area Level 1	Other Equipment	138,954	176,496	37,542
1761.6180	S&R Area Level 1	Electrical	5,216,384	9,968,654	4,752,270

CB&I AREVA MOX Services, LLC.

Schedule 1.23

MFFF Construction Change Incurred Claim Growth Through April 2013 - By Cost Account

Cost Account	Functional Area Descriptions	Cost Account Description	[A]	[B]	[C] = B - A
			2007 Baseline Timephased Through April 2013	Actual Costs Through April 2013	Incurred Claim Growth Through April 2013
1761.6190	S&R Area Level 1	Instrumentation	251,278	60,969	(190,308)
1762.6200	S&R Area Level 2	Building Structure	3,222,341	11,285,588	8,063,247
1762.6210	S&R Area Level 2	Architectural Features	19,075	144,469	125,394
1762.6220	S&R Area Level 2	HVAC	1,521,251	1,718,366	197,115
1762.6230	S&R Area Level 2	Shipping and Receiving Area (BSR) – Shipping and Receiving Area – Le	673,336	341,273	(332,063)
1762.6240	S&R Area Level 2	Utility Equipment & Piping	57,547	20,100	(37,447)
1762.6250	S&R Area Level 2	Process Piping	99,975	-	(99,975)
1762.6280	S&R Area Level 2	Electrical	1,306,585	1,779,306	472,721
1762.6290	S&R Area Level 2	Instrumentation	64,622	-	(64,622)
1763.6300	S&R Area Level 3	Building Structure	-	6,601,193	6,601,193
1763.6310	S&R Area Level 3	Architectural Features	256,275	260	(256,015)
1763.6320	S&R Area Level 3	HVAC	1,376,016	715,568	(660,448)
1763.6330	S&R Area Level 3	Shipping and Receiving Area (BSR) – Shipping and Receiving Area – Le	942,572	26,928	(915,643)
1763.6340	S&R Area Level 3	Utility Equipment & Piping	78,490	20,818	(57,672)
1763.6350	S&R Area Level 3	Process Piping	24,194	-	(24,194)
1763.6370	S&R Area Level 3	Other Equipment	3,935	-	(3,935)
1763.6380	S&R Area Level 3	Electrical	579,638	413,289	(166,349)
1763.6390	S&R Area Level 3	Instrumentation	854,251	489,747	(364,504)
1764.6400	S&R Area Roof/Other	Building Structure	-	2,489,996	2,489,996
1764.6470	S&R Area Roof/Other	Other Equipment	3,544	-	(3,544)
1764.6480	S&R Area Roof/Other	Electrical	-	10,454	10,454
1771.7100	Safe Havens (BSH)	Building Structure	3,991,904	1,124,123	(2,867,781)
1771.7110	Safe Havens (BSH)	Architectural Features	3,942,555	919,573	(3,022,982)
1771.7120	Safe Havens (BSH)	HVAC	497,628	-	(497,628)
1771.7130	Safe Havens (BSH)	Fire Protection	1,604	-	(1,604)
1771.7140	Safe Havens (BSH)	Utility Equipment & Piping	4,324	-	(4,324)
1771.7170	Safe Havens (BSH)	Other Equipment	176	-	(176)
1771.7180	Safe Havens (BSH)	Electrical	1,680,793	59,306	(1,621,486)
1771.7190	Safe Havens (BSH)	Instrumentation	124,468	-	(124,468)
1772.7200	Gabion Walls & Fills	Building Structure	13,863,037	12,434,210	(1,428,827)
1772.7210	Gabion Walls & Fills	Architectural Features	573,522	467,867	(105,655)
1772.7270	Gabion Walls & Fills	Other Equipment	147,323	-	(147,323)
1772.7280	Gabion Walls & Fills	Electrical	557,983	9,414	(548,569)
1774.7401	Distributables	Subcontractor Project Management/Project Controls	3,576,327	57,042,809	53,466,482
1774.7404	Distributables	Subcontractor Environmental, Safety and Health	-	(0)	(0)
1774.7406	Distributables	Subcontractor Mobilization	234,748	833,069	598,321
1774.7407	Distributables	Subcontractor Demobilization	14,387	159,399	145,012
1774.7408	Distributables	Dewatering, Erosion and Sedimentation Control	94,731	176,474	81,743
1774.7409	Distributables	Equipment Rental (Including Vehicles)	1,264,736	20,605,440	19,340,703
1774.7410	Distributables	Miscellaneous Procured Services	121,105	1,346,850	1,225,746
1774.7411	Distributables	Consumables and Expendable Materials	416,390	3,586,854	3,170,464
1774.7412	Distributables	Performance Bond	669,077	1,242,459	573,382

CB&I AREVA MOX Services, LLC.

Schedule 1.23

MFFF Construction Change Incurred Claim Growth Through April 2013 - By Cost Account

Cost Account	Functional Area Descriptions	Cost Account Description	[A]	[B]	[C] = B - A
			2007 Baseline Timephased Through April 2013	Actual Costs Through April 2013	Incurred Claim Growth Through April 2013
1774.7413	Distributables	Tools	119,025	458,474	339,449
1774.7414	Distributables	Craft Distributable and Indirect Costs	2,024,215	13,654,674	11,630,458
1774.7415	Distributables	Concrete Batch Plant	2,378,861	3,778,185	1,399,324
1774.7416	Distributables	Independent Test Lab	547,007	1,766,096	1,219,089
1774.7417	Distributables	NDE Testing	469,634	904,226	434,592
1774.7418	Distributables	Craft Support for MFFF Construction	775,735	20,097,098	19,321,363
1774.7440	Distributables	Support Building for the Fabrication of Supports on Site Specific to	-	7,902,496	7,902,496
1774.7442	Distributables	Craft Labor for Non-Discipline Specific Scope	-	5,872,930	5,872,930
1774.7445	Distributables	Craft Orientation & Training	-	581,367	581,367
1774.7454	Distributables	Bulk Procurement - Material	-	34,528	34,528
1774.7455	Distributables	Distributable - Subcontract	-	258,421	258,421
1775.7502	Batch Paint	Batch Plant Operations	-	20,729	20,729
1775.7503	Batch Paint	Batch Plant Concrete Materials	-	(118,899)	(118,899)
Total Installation			\$ 459,420,962	\$ 681,916,472	\$ 222,495,510
Adjustment: Less Non-DCS Costs					\$ 1,269,360
Total Installation Less Adjustment					\$ 221,226,150
1774.7419	Distributables	Construction Distributables - Misc	\$ 4,830,188	\$ 36,045,557	\$ 31,215,369
1774.7420	Distributables	Bulk Cable for MFFF Construction	5,434,400	23,935,638	18,501,238
1774.7424	Distributables	Distributables - Bulk Commodity - HVAC	9,042,374	5,654,073	(3,388,301)
1774.7427	Distributables	Rebar MFFF Construction	-	59,420	59,420
1774.7428	Distributables	Civil/Structural Material	6,863,128	39,973,410	33,110,282
1774.7429	Distributables	Distributables - Bulk Commodity - Stainless Steel Ball Valves	9,479,919	5,689,794	(3,790,124)
1774.7430	Distributables	Distributable - Bulk Commodity Account - Chillers	1,303,808	2,321,093	1,017,285
1774.7432	Distributables	Electrical Material and Other Miscellaneous Labor Acct	8,114,112	19,621,415	11,507,303
1774.7433	Distributables	Instrumentation & Controls Material	52,325,060	15,870,423	(36,454,637)
1774.7434	Distributables	Chemical Equipment	-	3,266,365	3,266,365
1774.7435	Distributables	Distributables - HVAC Equipment	3,782,750	24,265,396	20,482,646
1774.7436	Distributables	Suspense Account - Process Equipment	-	36,697	36,697
1774.7438	Distributables	Mechanical Equipment	29,418,463	101,957,491	72,539,027
1774.7439	Distributables	Consumable & Expendable Materials Specific to CP-27 – BAP Chemical P	850,562	12,879,774	12,029,212
Total Materials			\$ 131,444,766	\$ 291,576,546	\$ 160,131,780
Adjustment: Less Non-DCS Costs					\$ 10,621
Total Materials Less Adjustment					\$ 160,121,159
1003.8032	Site Construction Support	Civil / Structural	\$ 2,594,499	\$ 22,071,221	\$ 19,476,723
1003.8034	Site Construction Support	Electrical / I&C Site Construction Support	5,470,849	21,420,980	15,950,131
1003.8035	Site Construction Support	Chemical-Construction Support	3,062,366	7,653,802	4,591,437
1003.8036	Site Construction Support	Mechanical – Construction Support	1,132,810	5,928,315	4,795,505
1003.8037	Site Construction Support	Plant Configuration Site Construction Support	7,239,856	21,702,876	14,463,019

CB&I AREVA MOX Services, LLC.

Schedule 1.23

MFFF Construction Change Incurred Claim Growth Through April 2013 - By Cost Account

Cost Account	Functional Area Descriptions	Cost Account Description	[A]	[B]	[C] = B - A
			2007 Baseline Timephased Through April 2013	Actual Costs Through April 2013	Incurred Claim Growth Through April 2013
1003.8038	Site Construction Support	Engineering Mechanics - Site Construction Support	700,974	3,924,909	3,223,935
1004.8040	Procurement & Fabrication Support	Responsible Engineer Process Unit Fabrication Support	-	(466)	(466)
1004.8044	Procurement & Fabrication Support	Electrical / I&C Procurement and Fabrication Support	(85,836)	2,577	88,412
1004.8046	Procurement & Fabrication Support	Chemical-Procurement/Fabrication Support	205,128	3,045,436	2,840,309
1004.8047	Procurement & Fabrication Support	Mechanical – Procurement/Fabrication Support	194,324	324,093	129,769
1005.8052	Start-up & Operations Support	Mechanical – Startup & Operations Support	653,199	299,902	(353,296)
1005.8053	Start-up & Operations Support	Electrical / IC Startup and Operations Support	219,368	-	(219,368)
1005.8057	Start-up & Operations Support	Chemical/Mechanical Engineering Startup Support	163,176	120,514	(42,662)
Total Title III Engineering			\$ 21,550,712	\$ 86,494,160	\$ 64,943,449
Adjustment: EAC growth between 2007 Baseline and 2012 Rebaseline ⁽¹⁾					\$ 6,626,958
Adjustment: Less Non-DCS Costs					19,950
Total Title III Engineering Less Adjustment					\$ 58,296,541
Total MFFF Construction Change					\$ 439,643,850

Sources:

[A] Schedule 7.21

[B] Schedule 7.11

[C] Calculated

Adjustment - Schedule 5.1 for Non-DCS Costs

Notes:

(1) Incurred cost growth through April 2013 for MFFF Construction Title III Engineering is \$64,943,449. For purposes of this claim, incurred cost growth for MFFF Construction Title III Engineering is capped at the EAC growth between the 2007 Baseline and 2012 Rebaseline of \$58,316,491 (see Schedule 1.2). This amount is further reduced by \$19,950 for Non-DCS costs (see Schedule 5.1) for a total incurred claim amount of \$58,296,541.

CB&I AREVA MOX Services, LLC.
Unclaimed Cost Growth Cost Summary

Schedule 1.3

PCN 08-0211 (Process Unit Omitted Scope) Cost Summary⁽¹⁾

Account	[A] Change Log Total Cost	[B] 2007 Baseline	[C] 2012 Rebaseline with Addendum	[D] = C - B Cost Growth	Cost Adjustment
1708.875102.00000	\$ 219,416	\$ 2,885,451	\$ 5,114,003	\$ 2,228,552	
1709.876002.00000	4,580,272	4,908,957	6,695,721	1,786,764	
1709.876102.00000	1,818,693	902,886	2,574,199	1,671,313	
1709.876202.00000	5,979,244	3,842,794	8,777,184	4,934,390	
1709.876302.00000	6,177,077	4,736,568	12,537,135	7,800,567	
1709.876502.00000	4,808,256	1,636,981	3,731,677	2,094,696	
1710.876602.00000	6,972,663	2,888,271	12,167,729	9,279,458	
1710.876702.00000	6,972,663	2,923,928	12,142,482	9,218,554	
1710.876802.00000	6,972,663	2,935,212	2,272,489	(662,723)	
PCN 08-0211 Subtotal	\$ 44,500,947	\$ 27,661,048	\$ 66,012,617	\$ 38,351,569	\$ 38,351,569

REA 11-027 (Engineering Cost)⁽²⁾

\$ 35,798,527

Total**\$ 74,150,096****Sources:**

[A] PCN 08-0211 and September 2012 Contract Budget Log

[B] May 2007 PRISM data adjusted for budget transfers between July 2007 and September 2012.

[C] Schedule 1.31

[D] Calculated

CB&I AREVA MOX Services, LLC.
Unclaimed Cost Growth Cost Summary

Schedule 1.3

Notes:

(1) The 2007 Baseline inadvertently omitted scope related to portions of selected Process Units. PCN 08-0211 initially identified \$44,500,947 in estimated costs associated with this omitted scope of work in nine specific cost accounts. However, the PCN overestimated the cost. As of the 2012 Rebaseline with Addendum, these cost accounts only had a total of \$38,351,569 in cost growth - reflecting lower amounts for the omitted scope. Through April 2013, incurred cost growth was \$37,907,994, or slightly less than the growth to the 2012 Rebaseline with Addendum. For purposes of this claim, MOX Services is not claiming the \$38,351,569 of cost growth.

(2) On January 31, 2012 MOX Services issued REA 11-027 for the Impact of Nuclear Renaissance on Engineering, Project Services, and Business Services. As part of this claim, MOX Services applied a \$35,798,527 deduction to the analyzed engineering cost accounts for contractor responsible inefficiencies. For purposes of this claim, MOX Services is not claiming cost growth on the \$35,798,527 identified in REA 11-027. This deduction represents 100% of the cumulative cost account variance as of the end of FY 2011.

CB&I AREVA MOX Services, LLC.

Schedule 1.31

2012 Rebaseline with Addendum Costs for PCN 08-0211 Accounts

	[A]	[B]	[C] = A + B
Account	2012 Rebaseline	2012 Rebaseline Addendum (Trend EAC 12-0775A)	2012 Rebaseline with Addendum
1708.875102.00000	\$ 3,522,154	\$ 1,591,849	\$ 5,114,003
1709.876002.00000	5,799,589	896,132	6,695,721
1709.876102.00000	2,362,821	211,378	2,574,199
1709.876202.00000	7,482,232	1,294,953	8,777,184
1709.876302.00000	9,968,696	2,568,439	12,537,135
1709.876502.00000	4,061,555	(329,878)	3,731,677
1710.876602.00000	11,388,079	779,650	12,167,729
1710.876702.00000	11,337,042	805,439	12,142,482
1710.876802.00000	2,273,321	(832)	2,272,489
Total Accounts included in PCN 08-0211	\$ 58,195,488	\$ 7,817,130	\$ 66,012,617

Sources:

[A] 2012 contract proposal value as stated in December 2012 PRISM data and adjusted for 2012 Rebaseline Addendums

[B] Schedule 1.32

[C] Calculated

CB&I AREVA MOX Services, LLC.
Addendum Trend EAC 12-0775 Costs by Account

Schedule 1.32

Account	2012 Rebaseline Addendum (Trend EAC 12-0775A)
1708.875102.00000	\$ 1,591,849
1709.876002.00000	896,132
1709.876102.00000	211,378
1709.876202.00000	1,294,953
1709.876302.00000	2,568,439
1709.876502.00000	(329,878)
1710.876602.00000	779,650
1710.876702.00000	805,439
1710.876802.00000	(832)
Total Accounts in PCN 08-0211	\$ 7,817,130
Total All Other Accounts	\$ 39,822,056
Total EAC 12-0775A	\$ 47,639,186

Sources:

Change Log by Workpackage (December 2012 through June 2014)
Schedule 6.21

CB&I AREVA MOX Services, LLC.
 Summary of Contract Modifications with Release Language
 CLIN 0002, Option 1⁽¹⁾

Schedule 1.4

Date	Mod No.	Mod Description	Total Cost Changes ⁽²⁾	% Complete as of April 2013 ⁽³⁾	Total Adjustment Applied to Claim
Contract Modifications with Release Language					
7/23/2009	Mod 138	REA-09-001, LSR Unit Isotopic Composition Analysis (MC-ICP-MS vs TIMS)	\$ 281,426	49%	\$ 137,899
12/21/2009	Mod 148	REA 08-007, Training Simulator	10,176,123	49%	4,986,300
3/1/2010	Mod 151	REA 09-010, Monitoring and Inspection Regime; administrative corrections & edits	175,576	49%	86,032
4/12/2010	Mod 152	REA 10-001, Safety Recognition Incentive Program; REA 10-002 Metal Impurities	980,002	49%	480,201
4/30/2010	Mod 154	REA 10-009, GME Glovebox	587,845	49%	288,044
5/19/2010	Mod 156	REA 09-016/BCP 09-020, Manilab Robot Replacement for KPG Glovebox	279,779	100%	279,779
6/16/2010	Mod 157	REA 10-010/BCP 10-039, NRC Meeting Support, MA2 and MA4; REA 09-017/BCP 09-021, MDG Barcode Readers Replacement	419,743	49%	205,674
10/5/2010	Mod 163	REA 10-014, BAD Renovations	44,010	100%	44,010
12/15/2010	Mod 168 ⁽⁶⁾	Authorize undefinitized scope in the performance of REA 10-003 Multifunctional Fuel	3,514,721	49%	1,722,213
12/15/2010	Mod 169	REA 09-002 DOE O 551.1C Foreign Travel	68,572	49%	33,600
2/7/2011	Mod 171	REA 10-023, Purchase Analyzers; Admin changes	132,816	100%	132,816
7/14/2011	Mod 180	Definitize Contract Modification 168 to authorize an equitable adjustment for REA 10-003A; update Attachment 3 to the incentive/Milestone Fee Plan	19,310,033	49%	9,461,916
10/14/2011	Mod 185	Authorize an equitable adjustment for REA 11-019/UNCI Implementation and Proposal 11-002	3,214,896	100%	3,214,896
11/1/2011	Mod 188	Correct errors in Modification 185	(2,336,449)	100%	(2,336,449)
1/17/2012	Mod 195	Authorize an equitable adjustment to contract modification 162, REA 10-018 and Proposal 11-001; Incorporate revised tables into Section H.1, Government Furnished Property	4,766,108	100%	4,766,108
1/30/2012	Mod 198 ⁽⁷⁾	Authorize undefinitized scope to "Implement the Necessary Actions to Preserve the Option for the Addition of Plutonium Metal Oxidization Capability to the MFFF"	800,000	100%	800,000

CB&I AREVA MOX Services, LLC.
Summary of Contract Modifications with Release Language
CLIN 0002, Option 1⁽¹⁾

Schedule 1.4

Date	Mod No.	Mod Description	Total Cost Changes ⁽²⁾	% Complete as of April 2013 ⁽³⁾	Total Adjustment Applied to Claim
4/19/2012	Mod 201	Authorize equitable adjustment for REA 11-009 and Proposal 12-001; Add incremental funding; Incorporate changes to the list of Applicable Directives - 413.3B Program	835,668	49%	409,477
6/20/2012	Mod 203 ⁽⁷⁾	Definitize Modification 198 with an equitable adjustment for Proposal 12-002; Move \$1,800,000 from CLIN 0001 Base Contract to CLIN 0002 Option 1	5,157,832	100%	5,157,832
6/27/2012	Mod 205	Authorize an equitable adjustment for REA 12-006 and to add \$10,000 incremental funding for CLIN 0005 Other Activities	6,790,616	100%	6,790,616
Total			\$ 55,199,317		\$ 36,660,965 ⁽⁴⁾⁽⁵⁾

Sources:

Contract Modifications

Notes:

(1) MOX Services bilaterally agreed to seventeen Contract Modifications that included release language which noted, "the Contractor hereby releases the Government from any and all liability under this contract for further equitable adjustments or claims attributable to such circumstances giving rise to this REA." These Contract Modifications, plus two Contract Modifications that did not include release language but that were definitized in modifications with release language (see Footnotes 6 and 7), increased the amount of CLIN 0002 by \$55,199,317.

(2) Total cost changes to CLIN 0002 - Option 1 activities

(3) For purposes of this Claim, the 2007 Baseline was timephased using the estimated monthly spend in the 2012 Rebaseline. Based on this timephasing approach, 49% of the total 2007 Baseline project costs would have been incurred through April 2013 (Calculated as \$1,357,798,132 / \$2,778,822,480 = 49% (see Schedule 7.2)). This percentage was applied to Contract Modifications that are currently on-going. For Contract Modifications that have been completed, in full or in part, 100% completion was applied for the purposes of this Claim.

(4) REA 15-004 for funding included an adjustment of \$12,039,634 for Contract Modifications with Release Language as summarized below:

Contract modifications prior to 2012 Rebaseline	\$ 6,757,354
Contract modifications post 2012 Rebaseline	\$ 5,282,280
REA 15-004 contract modification adjustment	\$ 12,039,634

The contract modifications prior to the 2012 Rebaseline totaling \$6,757,354 have been included as adjustments to this claim after applying the estimated percent complete as of April 2013.

(5) The Sept. 2016 C16-003 Incentive Fee Certified Claim included a bottom line adjustment for Contract Modifications that overlapped with the Claim in the amount of \$57,768,678. These Contract Modifications added additional costs to the contract value, but did not include any associated fee. For purposes of this Claim, this adjustment has been removed.

CB&I AREVA MOX Services, LLC.
 Summary of Contract Modifications with Release Language
 CLIN 0002, Option 1⁽¹⁾

Schedule 1.4

<u>Date</u>	<u>Mod No.</u>	<u>Mod Description</u>	<u>Total Cost Changes⁽²⁾</u>	<u>% Complete as of April 2013⁽³⁾</u>	<u>Total Adjustment Applied to Claim</u>
(6) Contract Mod 168 authorized undefinitized scope, in the amount of \$3,514,721, but did not contain release language. Contract Mod 180 definitized Contract Mod 168 and added an additional \$19,310,033 to the contract value. Contract Mod 180 included release language and therefore both Contract Mod 168 and 180 are included in this bottom-line adjustment.					
(7) Contract Mod 198 authorized undefinitized scope, in the amount of \$800,000, but did not contain release language. Contract Mod 203 definitized Contract Mod 198 and added an additional \$5,157,832 to the contract value. Contract Mod 203 included release language and therefore both Contract Mod 198 and 203 are included in this bottom-line adjustment.					

CB&I AREVA MOX Services, LLC.
Management Reserve Pre-2007 EAC Baseline Adjustment Summary⁽¹⁾

Schedule 1.5

Description	Management Reserve Amount	Claim Adjustment For Pre-2007 EAC Baseline Adjustment	Notes
MR Before Scrubbing "EAC Scrubs"	\$ 312,830,000	\$ -	On Contract
Base Contract "EAC Scrub"	30,716,000	-	Base Contract - Not Claimed
Option 1 "EAC Scrub"	165,146,000	87,710,202	Estimated Amount For Claim Areas
Option 1 Escalation "EAC Scrub"	58,826,000	47,143,992	Estimated Amount For Claim Areas
Subtotal	\$ 567,518,000 ⁽²⁾	\$ 134,854,194	
MR Not On Contract	\$ 86,346,000	\$ -	Not On Contract and Not Claimed
Total	\$ 653,864,000	\$ 134,854,194	
2007 Baseline % Complete Thru April 2013 (Option 1 Only)		49% ⁽³⁾	
Total Adjustment Applied to Claim		\$ 66,078,555	

Sources:

Management Reserve information provided by MOX Services personnel
Schedule 7.2 (for % Complete)

Notes:

(1) Management Reserve accounted for by MOX Services as of the 2007 Baseline was \$653,864,000, which included MR agreed to as part of CLIN 0002 (\$312.8 million) and "EAC Scrubs," which included (a) costs removed from the Base Contract cost estimates and subsequently added to MR (\$30.7 million); (b) costs removed from the Option 1 cost estimates and subsequently added to MR (\$165.1 million); (c) costs removed from the escalation associated with the Option 1 cost estimates and subsequently added to MR (\$58.8 million); and (d) MR associated with scope of work not on contract (\$86.3 million). This schedule identifies the original cost estimate that was scrubbed from the selected cost accounts. The selected cost accounts included were all cost accounts that are claimed in this claim. As a result, none of the cost reductions that were made internally to the 2007 Baseline have been considered for purposes of measuring cost growth. For purposes of this claim, MOX Services is not claiming fee on \$66,078,555.

(2) The \$567,518,000 is included in the CLIN 0002 contract value.

(3) For purposes of this claim, the 2007 Baseline was timephased using the estimated monthly spend in the 2012 Rebaseline. Based on this timephasing approach, 49% of the total 2007 Baseline project costs would have been incurred through April 2013 (Calculated as \$1,357,798,132 / \$2,778,822,480 = 49% (see Schedule 7.2)).

CB&I AREVA MOX Services, LLC.
Scrubbed Management Reserve Adjustment

Schedule 1.51

Management Area	Description	Scrubbed MR Amount	Adjustment Amount⁽¹⁾
06	Project Management	\$ 2,145,525	\$ 2,145,525
10	Title III Engineering	43,911,939	43,911,939
11	Regulatory Affairs	44,907,597	-
16	Process Unit Assembly	4,007,049	4,007,049
18	Temporary Facilities & Services	2,000,132	2,000,132
20	Cold Startup	35,645,557	35,645,557
21	(OPC) Operations Preparation	32,528,155	-
Total		\$ 165,145,954	\$ 87,710,202

Sources:

Schedule 1.52

Notes:

(1) Excludes Option 1 Management Areas not included in the claim.

CB&I AREVA MOX Services, LLC.
Scrubs Detail

Schedule 1.52

<u>Area</u>	<u>MAFA</u>	<u>CACT</u>	<u>Scrubs</u>
06	0601	6000	\$ 1,408
06	0601	6001	57,452
06	0602	6010	59,334
06	0602	6011	126,626
06	0603	6020	114,593
06	0603	6021	125,001
06	0603	6022	114,688
06	0604	6030	114,660
06	0604	6031	57,468
06	0604	6032	57,755
06	0604	6033	297
06	0604	6034	114,955
06	0604	6036	834,111
06	0604	6037	107
06	0604	6038	139,460
06	0605	6040	179,473
06	0606	6050	46,384
06	0606	6051	253
06	0606	6052	361
06	0606	6053	230
06	0606	6054	219
06	0607	6060	690
Subtotal MA 06			\$ 2,145,525
10	1000	8001	\$ 937,727
10	1000	8002	130,152

CB&I AREVA MOX Services, LLC.
Scrubs Detail

Schedule 1.52

Area	MAFA	CACT	Scrubs
10	1000	8003	933,380
10	1000	8004	400,694
10	1000	8005	824,737
10	1000	8006	123,912
10	1001	8011	437,890
10	1002	8021	337,488
10	1002	8022	936,275
10	1002	8023	388,945
10	1002	8024	395,752
10	1002	8026	501,359
10	1002	8027	371,839
10	1003	8031	1,273,100
10	1003	8032	1,932,486
10	1003	8033	1,089,198
10	1003	8034	705,770
10	1003	8035	1,239,371
10	1003	8036	234,866
10	1003	8037	3,441,989
10	1003	8038	851,061
10	1004	8041	784,663
10	1004	8042	1,289,271
10	1004	8043	7,280,515
10	1004	8044	196,537
10	1004	8045	1,833,081
10	1004	8046	727,086
10	1004	8047	81,287

CB&I AREVA MOX Services, LLC.
Scrubs Detail

Schedule 1.52

<u>Area</u>	<u>MAFA</u>	<u>CACT</u>	<u>Scrubs</u>
10	1004	8048	2,172,113
10	1004	8049	1,615,493
10	1005	8051	1,137,978
10	1005	8052	1,633,367
10	1005	8053	1,578,960
10	1005	8054	1,921,870
10	1005	8055	478,450
10	1005	8056	126,077
10	1005	8057	2,663,380
10	1005	8058	903,820
Subtotal MA 10			\$ 43,911,939
11	1100	8101	\$ 770,787
11	1100	8102	848,935
11	1102	8121	4,681,137
11	1102	8122	4,176,007
11	1103	8132	520,720
11	1103	8133	320,547
11	1104	8141	833,166
11	1104	8142	3,171,953
11	1104	8143	808,266
11	1104	8144	968,058
11	1104	8145	248,929
11	1104	8146	312,855
11	1104	8147	189,700
11	1105	8151	1,173,677

CB&I AREVA MOX Services, LLC.
Scrubs Detail

Schedule 1.52

<u>Area</u>	<u>MAFA</u>	<u>CACT</u>	<u>Scrubs</u>
11	1105	8152	1,463,819
11	1105	8153	2,562,396
11	1105	8154	1,526,558
11	1105	8155	512,985
11	1105	8156	155,140
11	1106	8161	4,893,351
11	1106	8162	5,335,742
11	1106	8164	6,968,135
11	1109	8165	1,245,988
11	1109	8192	1,218,746
Subtotal MA 11			\$ 44,907,597
16	1600	8601	\$ 138,956
16	1600	8602	1,179,386
16	1600	8603	155,564
16	1602	8621	175,286
16	1603	8631	2,357,857
Subtotal MA 16			\$ 4,007,049
18	1805	8851	\$ 2,000,132
Subtotal MA 18			\$ 2,000,132
20	2000	9001	\$ 3,939,878
20	2000	9002	923,234
20	2000	9003	229,724
20	2000	9004	84,635
20	2002	9021	314,589

CB&I AREVA MOX Services, LLC.
Scrubs Detail

Schedule 1.52

<u>Area</u>	<u>MAFA</u>	<u>CACT</u>	<u>Scrubs</u>
20	2002	9022	789,289
20	2002	9023	169,426
20	2002	9024	707,696
20	2002	9026	819,526
20	2003	9031	1,880,803
20	2003	9032	817,692
20	2004	9041	8,015,752
20	2004	9042	6,151,814
20	2004	9043	6,117,792
20	2004	9044	597,349
20	2004	9045	731,941
20	2004	9046	476,075
20	2004	9047	2,878,342
Subtotal MA 20			\$ 35,645,557
21	2100	9501	\$ 1,338,639
21	2100	9502	142,417
21	2100	9503	101,142
21	2100	9504	1,272,887
21	2100	9506	12,876
21	2101	9518	31,561
21	2102	9522	223,454
21	2102	9523	7,348,083
21	2102	9524	8,875,286
21	2102	9525	9,934,950
21	2103	9531	198,260

CB&I AREVA MOX Services, LLC.

Scrubs Detail

Area	MAFA	CACT	Scrubs
21	2103	9532	469,012
21	2103	9533	362,359
21	2103	9534	853,914
21	2103	9535	45,509
21	2103	9536	29,172
21	2103	9537	1,288,634
Subtotal MA 21			\$ 32,528,155
Total			\$ 165,145,954

Sources:

"Scrubs Detail.xlsx"

CB&I AREVA MOX Services, LLC.
Estimated Escalation Management Reserve on Claimed MA's

Schedule 1.53

Description	Amount	Source
Escalation "EAC Scrub"	\$ 58,826,000	MOX Services
Percent of MR on Claimed MA's	80.14%	Schedule 1.54
Total Escalation Adjustment	\$ 47,143,992	

CB&I AREVA MOX Services, LLC.
MR Analysis (In Thousands)

Schedule 1.54

Management Area	[A] ETC	[B] = A / Total A % of Total	[C] Adjustment Amount⁽¹⁾	[D] = C / Total A % of Total
06	\$ 193,372		\$ 193,372	
10	176,743		176,743	
11	56,349		-	
15	66,615		66,615	
16	22,666		22,666	
17	1,331,488		1,331,488	
18	57,737		57,737	
20	159,961		159,961	
21	258,485		-	
Option 1 Subtotal	\$ 2,323,416	92.70%	\$ 2,008,582	80.14%
01	46,722		-	
12	36,634		-	
13	45,752		-	
14	53,773		-	
Base Subtotal	\$ 182,881	7.30%	\$ -	
Total	\$ 2,506,297	100.00%	\$ 2,008,582	80.14%

Sources:

"2007 BASELINE Cost Summary.pdf"

Notes:

(1) Excludes Base Contract amounts and Option 1 Management Areas not included in the claim.

CB&I AREVA MOX Services, LLC.
Costs Not Claimed Based on Review by MOX Services Personnel

Account	Account Description	Costs Incurred Through April 2013
0601.600106.10000	Luncheons FY10	\$ 4,336
0601.600106.11000	Luncheons FY11	7,693
0601.600106.12000	Luncheons FY12	125,727
0601.600106.13000	Luncheons FY13	-
0601.600107.10000	Promotional Items FY10	34,988
0601.600107.13000	Promotional Items FY13	-
0604.603107.00000	HR Retention Expense	4,285,928
0604.603107.08000	HR - Retention Expense (ODC)	6,353,307
0604.603107.09000	HR - Retention Expense (ODC)	6,556,500
0604.604501.08000	Gateway Instructors	1,818
0604.604501.09000	Gateway Instructors FY09	8,858
0604.604501.10000	Gateway Instructors FY10	4,455
0604.604502.09000	Gateway Vendors ODC	104,550
0604.604502.10000	Supports for Gateway Instructors FY10	147,277
0604.604503.08000	Outside ODCs for Gateway	2,593
0604.604503.09000	Outside ODCs for Gateway FY09	13,915
0604.604503.10000	Outside ODCs for Gateway FY10	21,877
0604.604504.08000	Gateway Training Labor	31,218
0604.604504.09000	Gateway Training Labor FY09	63,087
0604.604504.10000	Gateway Training Labor FY10	91,994
0604.604505.08000	Gateway Rotation Labor	2,070
0604.604505.09000	Gateway Rotation Labor FY09	156,646
0604.604505.10000	Gateway Rotation Labor FY10	78,111
0604.604508.09000	Recruiting Trips for Gateway ODC FY09	1,420
2201.814804.12000	Fitness Center Promotional Items FY12	2,876
2201.814805.11000	VPP Promotional Items FY11	5,914
2201.814805.12000	VPP Promotional Items FY12	-
2201.814805.13000	ES&H Promotional Items FY13	6,748
Total for Accounts Not Claimed		\$ 18,113,904 ⁽¹⁾
Settlement of JLE Costs		\$ 800,000 ⁽²⁾
Post-April 2013 Credited Costs		\$ 6,073,788 ⁽³⁾
Suspension of Work Due to Funding		\$ 142,624 ⁽⁴⁾
Total Costs Not Claimed		\$ 25,130,316

CB&I AREVA MOX Services, LLC.
Costs Not Claimed Based on Review by MOX Services Personnel

<u>Account</u>	<u>Account Description</u>	<u>Costs Incurred Through April 2013</u>
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Sources:

February 2017 PRISM data

Accounts and costs identified by MOX Services personnel

Notes:

- (1) The 2007 Baseline estimated minimal costs for these accounts. Therefore, the amount removed from this Claim reflects the total costs incurred through April 2013.
- (2) Based on information provided by MOX personnel.
- (3) Reflects costs incurred and billed for through April 2013 that were later credited after April 2013 within MOX invoices 185A, 193A, and 200B.
- (4) Reflects suspension of work costs incurred through April 2013 for subcontractors Petersen, Major Tool, and DMP caused by funding reductions.

CB&I AREVA MOX Services, LLC.
Adjustment for Additional Non-DCS Costs Not Claimed⁽¹⁾

Claim Category	Cost Account	Cost Account Description	[A]	[B]	[C] = B - A
			2012 Rebaseline with Addendum	Actual Costs Incurred Through April 2013	Additional Adjustment ⁽¹⁾
Hotel Load	0601.6001	Communications	\$ 77,479	\$ 79,052	\$ 1,573
Hotel Load	0602.6010	Project Controls	13,793	13,793	-
Hotel Load	0604.6038	Facility Management	1,741,230	1,741,230	-
Hotel Load	0607.6060	IT Support	8,774	17,631	8,857
Hotel Load	0607.6061	IT Other Direct Costs (ODCs)	24,031	34,638	10,607
Hotel Load	1002.8021	Supervision / Admin	826	826	-
Hotel Load	1003.8032	Civil / Structural	80,702	80,702	-
Title III Engineering	1003.8034	Electrical / I&C Site Construction Support	19,950	19,950	-
Direct Process Unit	1623.8785	Process Assembly Facilities	575,255	575,255	-
Direct Process Unit	1705.8725	STK - Rod Storage	16,045	16,045	-
Direct Process Unit	1707.8744	Lab Equip - LFX	3,794	6,447	2,653
Direct Process Unit	1711.8772	KDB - Dissolution	845	35,176	34,331
Direct Process Unit	1711.8773	KDD - Dissolution of Chlorinated Feed	844	35,175	34,331
Direct Process Unit	1713.8790	Process Unit Support	-	769	769
Installation	1721.2101	Site Preparation	28,442,240	28,442,240	-
Installation	1722.2202	F" Road"	2,793,506	2,793,506	-
Installation	1724.2401	Underground Utilities	145,189	145,189	-
Installation	1725.2501	Yard Fire Protection	2,305	2,305	-
Installation	1728.2801	Yard Electrical & Lighting	11,481	13,979	2,498
Installation	1731.3150	Administration Building	58,950	60,278	1,328
Installation	1733.3350	Secured Warehouse Building	227	227	-
Installation	1734.3450	Tech Support & Access Control Building	1,663	70,808	69,145
Installation	1741.4100	Building Structure	1,612,899	1,612,899	(0)
Installation	1751.5100	Building Structure	859,223	859,223	(0)
Installation	1751.5150	Process Piping & Equipment	884	884	-
Installation	1761.6100	Building Structure	991,832	991,832	(0)
Installation	1772.7210	Architectural Features	-	61,668	61,668
Installation	1774.7410	Miscellaneous Procured Services	261,097	273,888	12,791
Installation	1774.7416	Independent Test Lab	582,588	747,104	164,516
Installation	1774.7417	NDE Testing	29,368	29,368	-
Materials	1774.7433	Suspense Account - Instrumentation & Controls	163	163	-
Materials	1774.7438	Suspense Account - Mechanical Equipment	10,458	63,148	52,690
Materials	1774.7439	Consumable & Expendable Materials Specific to CP-27 – BAP Chemical P	-	293,832	293,832
Hotel Load	1802.8820	Supplies & Services	8,945	8,945	-
Hotel Load	1802.8821	Office Equipment, Furniture Leases & Purchases	1,248,289	1,285,594	37,305
Hotel Load	1803.8832	Buildings Shops / Trailers	885,285	885,285	-
Hotel Load	1803.8833	Utilities & Services	3,067,642	3,067,642	-
Hotel Load	1804.8840	Equipment	525,052	525,052	-
Hotel Load	1804.8842	Construction Materials Management	-	-	-
Hotel Load	1804.8843	Tools	-	-	-
Hotel Load	1805.8850	Miscellaneous Field Supplies & Services	586,712	591,038	4,326
QA	1901.6023	Quality Control Projects	-	33,854	33,854

CB&I AREVA MOX Services, LLC.
Adjustment for Additional Non-DCS Costs Not Claimed⁽¹⁾

Claim Category	Cost Account	Cost Account Description	[A]	[B]	[C] = B - A
			2012 Rebaseline with Addendum	Actual Costs Incurred Through April 2013	Additional Adjustment ⁽¹⁾
Hotel Load	2103.9532	Laboratory Procedures	7,321	7,321	-
Hotel Load	2103.9537	Support to Other groups	-	4,066	4,066
Hotel Load	2201.8144	Industrial Safety Program	-	3,045	3,045
Hotel Load	2201.8145	Waste Management Program	9,075	14,403	5,328
Hotel Load	2201.8146	Fitness for Duty Program	6,211	6,211	-
Hotel Load	2201.8148	Employee Safety Incentive Program	6,346	6,346	-
Hotel Load	2201.8149	ES & H Safety Engineer	-	4,003	4,003
Hotel Load	2202.9504	Radiological Protection Early Start Up	13,405	13,494	89
		Total	\$ 44,731,923	\$ 45,575,528	\$ 843,605

Sources:

[A] December 2012 PRISM Data and the following Schedules:

Direct Process Unit: Schedule 3.12 and 3.22

Hotel Load: Schedule 3.43

Installation/Materials/Title III Engineering: Schedule 5.2

[B] February 2017 PRISM Data

[C] Calculated

Notes:

(1) This schedule quantifies the amount of actual non-DCS costs incurred through April 2013 beyond that which was estimated in the 2012 Rebaseline with Addendum. Non-DCS cost growth between the 2007 Baseline and 2012 Rebaseline with Addendum has already been removed elsewhere in the Claim Schedules. For purposes of this Claim, any additional non-DCS costs (above the 2012 Rebaseline with Addendum) incurred through April 2013 are removed as an additional bottom line adjustment.

II. MOX SERVICES IS ENTITLED TO 10% FIXED FEE ON THE OUT-OF-SCOPE COSTS PRESENTED IN THIS CLAIM

Through a unique, complex process, the MFFF is designed to transform weapons-grade plutonium from the U.S. nuclear weapons stockpile into nuclear fuel. Moreover, MOX Services must accomplish this work under political and regulatory circumstances that themselves present significant risk and complexity.

MOX Services is entitled to a fixed fee of 10% on all added work scope it has performed and will perform to meet the goals of the Option 1 contract. MOX Services believes that a fixed fee is the appropriate structure for the added scope because, as demonstrated by the Project to date, the level of effort necessary to complete the construction phase of the MFFF is so uncertain.³² In these circumstances, MOX Services is entitled to recover the maximum allowable fixed fee of 10% on the added scope of work and related costs presented in this Claim.³³

As an initial matter, both the Changes clause and case law mandate fee recovery in connection with out-of-scope work.³⁴ As explained in *New York Shipbldg. Co.*, ASBCA No. 16164, 76-2 BCA ¶ 11,979 (June 25, 1976):

without the payment of a profit which is fair under the circumstances, the Government would be getting something for nothing and the contractor would not truly be made whole.

The amount of fee should be calibrated to fairly reflect the nature of the work and the risks involved.³⁵ That is, the greater the complexity of and risks associated with the work, the higher the appropriate fixed fee percentage. MOX Services's performance of out-of-scope work on this Project thus is entitled to the full 10% fixed fee allowed under the controlling statute, 41 U.S.C. §3905(b)(1).

The 10% fixed fee is higher than the 6% - 7% fee to which the parties agreed on the original scope of work. The higher fixed fee on the added work is warranted here, because the work MOX Services is performing is at least as complex, and entails more risk, than the original scope of Option 1. *See* Nash and Feldman, *Government Contract Changes*, at § 16:21 (observing that the contractor is entitled to a higher fee percentage where the work performed under the changes clause is more difficult or involves a higher degree of risk than the original work); *Am. Pipe & Steel Corp.*, ASBCA. No. 7899, 1964 BCA ¶ 4058 (Jan. 31,

³² FAR 16.306(b)(1)(i).

³³ 41 U.S.C. §3905(b)(1).

³⁴ FAR 52.243-2; *see United States v. Callahan Walker Constr. Co.*, 317 U.S. 56 (1942).

³⁵ Ralph C. Nash, Jr. & Steven W. Feldman, *Government Contract Changes*, at § 16:21 (3d ed. 2007).

1964) (awarding 3% increase in fee percentage, from 7% to 10%, on cost plus fixed fee contract where additional work was more complex than work originally contemplated).

A. The Complexity Of The Project Entitles MOX Services To The Maximum Allowable Fixed Fee Percentage

That the MOX Project represents one of the most complex nuclear facility construction projects in the country is self-evident. From design and technical standpoints, the added scope of work described in this Claim constitutes some of the most complex and novel federal construction work currently underway. Moreover, the design and technical complexity of constructing the Project has been compounded by political and regulatory challenges, which have added risk to the Project. The extent and effect of these challenges has fallen squarely on the added work scope.

All of these factors compel the conclusion that MOX Services' added work is entitled to the maximum fixed fee percentage recovery allowed. 41 U.S.C. § 3905(b)(1); 48 C.F.R. § 15.404-4(c)(4)(i)(A).

1. The Out-Of-Scope Work Represents Some of the Most Complex Construction Ever

The Project combines into one facility two distinct processes, each of which represents significant technological challenges. The aqueous polishing section of the Project will remove impurities from the weapons-grade plutonium in a five-level facility.³⁶ The fuel fabrication portion of the Project takes place on three levels, where, through a series of complex processes, the plutonium is combined with other materials into "mixed oxide" and is formed into pellets and sintered. These pellets are then assembled into fuel rods and the fuel rods made into completed assemblies. All told, the Project will be a 600,000 square foot facility, and will include 23,000 instruments, 85 miles of piping,³⁷ and 7.3 million feet of power and control cable.³⁸ DOE has characterized the MFFF as among the Department's "largest, most complex nuclear work going forward...."³⁹

³⁶ Parsons, Longenecker & Associates, Root Cause Analysis of Cost Increases, Mixed Oxide Fuel Fabrication Facility and Waste Solidification Building, Savannah River Site, South Carolina, (May 23, 2014) ("RCA") at 2-1. ("Exhibit 18").

³⁷ *Id.* at 2-1. Final installed quantities are estimated to be even greater.

³⁸ MOX Fuel Fabrication Facility, Monthly Status Report, (March 2014) at 35. ("Exhibit 19").

³⁹ United States Government Accountability Office, GAO-14-231, Plutonium Disposition Program: DOE Needs to Analyze the Root Causes of Cost Increases and Develop Better Cost Estimates (Feb. 2014) ("GAO-14-231") at Appendix V. ("Exhibit 20").

An overarching complicating factor is the administrative and technical complexity inherent in the switch in MOX Services' predominant role. MOX Services started as a construction manager that would preside over a limited number of fixed-price contracts. MOX Services' role changed during performance, as recognized in Modification 152. From that point on, MOX Services was expected to self-perform a greater percentage of the work, and use more subcontractors to perform limited scopes of work under other than fixed-price contracts. All of these changes made MOX Services' role significantly more complicated.

Additionally, political challenges have added external complexities to MOX Services' work. Internationally, the Russian parallelism requirement has caused DOE to block certain aspects of MOX Services' work and to direct its scheduling in suboptimal sequences. On the national level, federal political support for the Project has waxed and waned. From the beginning, some members of Congress have questioned DOE's chosen method for meeting the PDMA's requirements, and that opposition has hardened as the scope and associated costs of the Project have grown.

Further, the strict regulatory environment under which MOX Services must perform adds complexity. The governing NRC regulations and the required quality assurance program ("NQA-1"), whereby materials must be verified as meeting exacting standards and the implementation of detailed work processed document, complicates and slows work. Constructing the MFFF has presented a series of challenges, from the paucity of NQA-1 certified contractors to suppliers' unfamiliarity with and process challenges in meeting NQA-1 standards for documenting the source quality of materials used.

Indeed, DOE has acknowledged that "[w]hat we did not allow for was that with the equipment suppliers who advertise that they have a NQA-1 program, those programs have sat on the shelf for many, many years. It would quickly become apparent that the suppliers really didn't know what they were doing as far as NQA-1. These contractors didn't understand that there wasn't room for interpretation. It calls for verbatim compliance and implementation. I think it would be fair to say it's been a shock to them the same phenomenon has occurred with construction subcontractors."⁴⁰

In sum, informed by several years' experience on the Project, the complexity of MOX Services' work counsels in favor of the maximum fixed fee percentage allowed.

B. The Risks Attending MOX Services' Performance Entitles It To The Maximum Allowable Fixed Fee Percentage

The risks that have been foisted upon MOX Services have taken many forms. Among others, these include significant diminishment in MOX Services' effective fee percentage

⁴⁰ See DOE publication "NQA-1: An Overview for Federal Project Directors" at p. 12. ("Exhibit 21"). These same standards also apply to commodity trade work within the MOX facility, whether it is pipefitting, electrical work, or the installation and testing of safety systems.

rate on completed work, the opportunity costs of a prolonged performance period on the Project, and the reputational risk of performing a contract that is in danger of failing through no fault of its own. These circumstances warrant the 10% fixed fee percentage allowed at the top end of the statutory scale.

When DOE and MOX Services embarked on Option 1, both parties understood that there was significant design and technical uncertainty inherent in this first-of-a-kind nuclear facility. In theory, the cost-type nature of the contract insulated MOX Services from many of the risks of the Project, and, as such, MOX Services accepted a modest fee of 6% - 7%, split into several fee pools. In practice, however, MOX Services has shared the risk of the Project, particularly on the added scope of work. Although DOE has reimbursed most of MOX Services' costs on Option 1, and while Option 1 is far from complete, as it stands now MOX Services' fee percentage is well short of the 6% – 7% negotiated for Option 1.

Further, MOX Services' performance of the added scope of work entails opportunity costs. After a twenty-year hiatus in which no new nuclear facilities came on-line in the United States, several new reactors have started construction in recent years.⁴¹ MOX Services' members have focused on completing the construction of the MFFF, and have diverted some of their most talented engineers and management professionals to this Project.

Additionally, the Project carries significant reputational risk for its members. Although MOX Services' members have been powerless to remedy or head off the great majority of delays and scope and cost increases the Project has experienced, their continued performance on the added scope of work risks the taint that would ensue if the MFFF is halted or cancelled. This risk, too, should be compensable in the form of increased fixed fee percentage.

C. MOX Services' Cost Basis Method For Identifying Incurred Costs

This Claim is for fee on the costs of out-of-scope work, as measured by the portion of the cost growth between the 2007 Baseline and the 2012 Rebaseline with Addendum that was incurred through April 2013.

The 2007 Baseline included a MFFF Project cost estimate of \$3.650 billion. This projection was based on actual costs incurred through May 2007 and estimated costs from June 2007 through the completion of the Project in FY14.⁴² All actual and estimated costs

⁴¹ These include WATTS BAR-1, SUMMER 2 and 3, and Vogtle 3 and 4. *See* www.iaea.org.

⁴² The cost estimate of \$3.650 billion excluded Management Reserve, contingency, and fee. With these items included, the 2007 Baseline's total cost projection was \$4.814. Letter DCS-DOE-002834 from Dave Stinson, Shaw AREVA MOX Services, President and Project Manager, to Clay Ramsey, NNSA, MFFF Federal Projector Director (July 20, 2007). ("Exhibit 22").

were “timephased,” *i.e.*, tracked or projected by cost account (which roll up into Management Areas) and by month.

MOX Services used the \$3.650 billion Baseline to measure its performance, and the 2007 Baseline was included in its monthly performance reports. The 2007 Baseline was reflected in the Project Execution Plan and, as used in this Claim, was adjusted for the budget allocation request that reallocated original budget between different cost accounts. The 2007 Baseline also reflects the reductions that MOX Services made to their internal estimates. These reductions are referred to as EAC “scrubs” in MOX’s 2008 Management Reserve Recalculation.⁴³

The October 2012 Rebaseline Proposal relied on actual costs incurred through May 2012, and updated the cost and schedule projections based on the NNSA-specified funding profile. Like the 2007 Baseline, the 2012 Rebaseline tracked and projected costs by cost account by month. With an incorporated Addendum, the MFFF Project cost estimate was \$6.615 billion, or \$2.964 billion more than the 2007 Baseline.⁴⁴ As directed by NNSA, MOX Services utilized the 2012 Rebaseline to report status in Monthly Status Reports and EVMS.

In FY13, NNSA announced additional funding constraints which severely altered the execution of the Project, and since that time NNSA has been unable to provide MOX Services with a reliable funding profile that is necessary to plan the work and to develop new cost and schedule estimates. Accordingly, this Claim utilizes the 2012 Rebaseline with Addendum to define scope changes and to measure corresponding cost increases and schedule delay.

⁴³ REA 08-008 Option 1 Proposal Management Reserve Recalculation. For purposes of this Claim the EAC “scrubs” are reflected as a bottom line adjustment. (“Exhibit 23”).

Subsequent to the Option 1 definitization, MOX Services and NNSA agreed to a Management Reserve of \$316.5 million in cost. MOX Services allocated this Management Reserve to cost growth and changes recognized between 2007 and 2012. For purposes of this Claim, any allocation of Management Reserve has been eliminated or removed from the calculation of cost growth. The May 2012 Monthly Report indicated that the remaining Management Reserve was less than \$1 million. (“Exhibit 24”).

⁴⁴ The December 2012 PRISM EAC of \$6.328 billion includes the \$6.041 billion for costs for CLIN 0002 and an additional \$287 million for costs not on contract (*e.g.*, Management Area 90 costs). The additional \$285.9 million related to the 2012 Rebaseline Addendum was added to the December 2012 PRISM EAC, which results in an EAC of \$6,614,501,585. Management Reserve is not included in the PRISM EAC. *See* Schedules 6.0 to 6.2 for 2007 and 2012 EAC calculations.

This Claim measures the cost impacts of the out-of-scope work by comparing the 2007 Baseline to the 2012 Rebaseline with Addendum.⁴⁵ Specifically, MOX Services has calculated incurred out-of-scope costs through April 2013 by comparing the timephased 2007 Baseline to actual costs through April 2013 (as taken from MOX Services' PRISM cost accounting system).⁴⁶ This comparison process proceeded in two steps.

First, because there had been a number of funds transfers across cost accounts between the 2007 Baseline and the 2012 Rebaseline that were not timephased, in order to make an accurate calculation of additional work by cost account, MOX Services applied the 2012 Rebaseline's timephased actual and projected costs for the entire Option 1 period. By this process, MOX Services calculated a monthly spend percentage, or "spend curve," for each cost account. MOX Services then applied that spend percentage to the 2007 Baseline to create an expected monthly spend for each cost account.

As applied, the 2007 Baseline's projected total cost was \$3.65 billion, with \$811 million in actual costs through May 2007, and \$2.84 billion in to-go costs from June 2007 to Project completion. The 2012 Rebaseline's projected total cost before Addendum was \$6.33 billion, again with \$811 million in actual costs through May 2007, and the \$5.5 billion balance split between actual costs through December 2012 and projected costs thereafter.⁴⁷ For example, the 2007 Baseline projected to-go costs of \$1.285 billion for all cost accounts in Management Area 17. The 2012 Rebaseline set forth the actual and projected spends for this Management Area to total .49% in June – September 2007; 2.52% in FY 2008; 5.17% in FY 2009; and so on. In all, under the 2012 Rebaseline, 53.7% of MA 17 was to be spent from June 2007 – April 2013, and the remaining 46.3% thereafter.⁴⁸

These spend curve percentages were then applied to the 2007 Baseline estimates, such that, for example, in MA 17 the timephased to-go costs were \$6.4 million in June – September 2007 (.49% * \$1.285 billion); \$32.4 million in FY 2008 (2.52% * \$1.285 billion); \$66.4 million in FY 2009 (5.17% * \$1.285 billion); and so on.

Second, the timephased 2007 Baseline estimated costs over time were compared to the actual costs incurred, by cost account and Management Area, in the same periods through April 2013. The differences between estimated costs and actual costs produced the incurred

⁴⁵ It is reasonable and proper to measure impacts through the 2012 Rebaseline with Addendum because it reflects the last bottom-up EAC reflecting a full funding profile through Project completion.

⁴⁶ This limitation aligns this Claim with MOX Services' Incentive Fee Claim, C-16-003, and avoids the complication of distinguishing additional costs brought about by the funding reductions from those caused by the bases discussed in this Claim.

⁴⁷ The \$285 million in costs added to the 2012 Rebaseline to establish the 2012 Rebaseline with Addendum were not timephased, so the timephasing in the 2012 Rebaseline before Addendum as reflected in the December 2012 PRISM data.

⁴⁸ See Schedule 7.4.

cost growth for out-of-scope work on which MOX Services claims present entitlement to fixed fee. Continuing the MA 17 example, the 2007 Baseline timephased to-go costs for FY 2008 was \$32.4 million, but the actual MA 17 spend in this period was \$65.6 million. Thus, MOX Services here claims fixed fee on the \$33.2 million by which the amount incurred in this period exceeded the 2007 projection (\$65.6 - \$32.4).⁴⁹

As shown in the Schedules, this Claim carries out this methodology across all cost accounts and claims 10% fixed fee on the difference between the 2007 Baseline timephased through April 2013 and the actual costs incurred through April 2013. *See, e.g.*, Schedule 1.211 (Process Unit Fabrication incurred claim growth through April 2013).

⁴⁹ This Claim acknowledges a total of \$290,177,528 in bottom line cost adjustments for unclaimed cost growth, contract modifications with release language that prohibits additional fee, and pre-2007 EAC baseline adjustments. *See* Schedule 1.01. As impacts the amount of incurred costs on which MOX Services here claims entitlement to fee, this Claim recognizes approximately 70%, or \$202,863,537, of these adjustments through April 2013. *See* Schedule 1.0. All of the bottom line adjustment for unclaimed cost growth is included. The contract modifications with release language have been reviewed by MOX personnel and those modifications where the associated costs are to be incurred over the entire Option 1 period have been time-phased, consistent with the claim methodology. *See* Schedule 1.4. The remaining contract modifications' amounts are included at 100%. The pre-2007 EAC baseline adjustment has been time-phased, consistent with the claim methodology. *See* Schedule 1.5.

III. PROCESS EQUIPMENT CHANGES

Beginning in March 2003, MOX Services repeatedly sought authorization to conduct pilot procurements of select process equipment. MOX Services had determined that early procurements would provide needed information to estimate accurately and reliably the cost and schedule for fabricating and testing the process units. For several years however, due to governmental concern that progress on the domestic MFFF not exceed Russia's progress on its MFFF, DOE refused to allow MOX Services to meaningfully engage potential vendors for this crucial feedback, much less conduct the requested pilot procurements. Rather than being allowed to test its estimating assumptions for these unprecedented procurements in an applied manner, MOX Services had no alternative but to create its estimates in a vacuum, without critical input from the subcontractors who would build the equipment.

Both MOX Services and the government knew the requirement for the U.S. MFFF to proceed in tandem with the Russian MFFF could produce a host of cost increases and schedule delays that could not be predicted, quantified or mitigated. NNSA agreed to accept 100% of the consequences of the risk, whatever the precipitating cause and whatever the associated costs. Accordingly, risks "related to" the "Russian parallelism" requirement explicitly were excluded from the Option 1 Contract scope, and therefore, would not be part of the estimated costs on which MOX Services' fee was based. If these risks materialized, the resulting cost and schedule increases would constitute work outside the Option 1 scope, and MOX Services would be entitled to fee on this new scope.

In late 2007, after more than four years of denying MOX Services' requests, NNSA finally released MOX Services to conduct pilot procurements. The results were startling. MOX Services learned that the process equipment would be more expensive and time-consuming for vendors to build than MOX Services had estimated, and that the effort would require much more input and oversight by MOX Services. Given DOE's stated cause for refusing to authorize pilot procurements, it is clear that, if not for the Russian parallelism requirement, DOE would have allowed pilot procurements before MOX Services submitted its Option 1 proposal. From those pilots, MOX Services would have known well in advance of the Option 1 proposal that MOX Services' estimating models could not be relied upon for process units.

Time has shown that the process unit underestimates were systemic, not isolated. The challenges first identified in the pilot procurement proved to be inherent, or at least tenacious, in this unprecedented project. Americanizing the French reference plant designs and fabricating the process units within the strictures of the NRC's regulatory regime – specifically, the Nuclear Quality Assurance ("NQA-1") criteria outlined by the American Society of Mechanical Engineers ("ASME") – were more difficult and expensive than NNSA and MOX Services anticipated before the pilot procurements. Thus, much of the cost and schedule increase is due to the unrealistically low estimates that resulted from the limited information DOE allowed MOX Services to gather.

That the process unit estimates would prove to be too low unquestionably is “related to” the Russian parallelism requirement. It is precisely the type of risk that NNSA and MOX Services agreed would be excluded from the scope of Option 1. NNSA accepted this risk and thus must equitably adjust MOX Services’ fee to account for what is, by contractual definition, added work scope.

To estimate the amount of fee-bearing out-of-scope work MOX Services has performed and will perform on the process units, MOX Services has compared the estimates set forth in the 2007 Baseline to those in the 2012 Rebaseline with Addendum, which resulted in a cost growth of \$1,367,192,210.⁵⁰ The government is responsible for \$1,324,966,109 in out-of-scope work, of which \$543,116,396 is discrete costs and \$781,849,714 are time-related.⁵¹ As shown in Chart III.1, \$705,645,643 had been incurred through April 2013 and is being claimed by MOX. Of that estimated incurred claimed growth through April 2013, \$344,001,411 is discrete costs, which reflect estimated additional costs to fabricate and assemble the units, and to perform Title III engineering and quality assurance (QA) functions. The remaining out-of-scope costs, \$361,644,231 claimed incurred growth through April 2013, are time-related costs, or “Hotel Load,” and reflect the estimated schedule extensions of approximately 42 months for the completion of Option 1 caused by delays in the process unit procurement cycle.⁵²

⁵⁰ It is appropriate and reasonable for this Claim to measure the impact by comparing the 2007 Baseline to the 2012 Rebaseline with Addendum. The 2007 Baseline carried forward the estimates contained in MOX Services’ Option 1 proposal, and the 2012 Rebaseline is the last comprehensive EAC that reflects a full funding profile through Project completion. In other words, the best estimate of the out-of-scope process unit-related costs are those developed for the 2012 Rebaseline, which incorporates approximately 4½ years of Project experience and significant hard data (actuals) from the 2007 Baseline.

⁵¹ See Schedule 1.21.

⁵² The 2012 Rebaseline included an approximately 42 month delay relative to the 2007 Baseline.

Chart III.1, Total Process Equipment Cost Growth⁵³

	[A]	[B]	[C] = B - A	[D]
Category Description	2007 Baseline	2012 Rebaseline with Addendum	Cost Growth	Incurred Claim Growth Through April 2013
Process Unit Fabrication	\$ 234,510,584	\$ 589,956,954	\$ 355,446,370	\$ 248,271,175
Process Unit Assembly, Materials, and Supervision	83,887,205	185,032,060	101,144,856	66,010,765
Process Unit Title III Engineering	27,146,095	83,802,398	56,656,303	10,740,852
Subtotal	\$ 345,543,884	\$ 858,791,412	\$ 513,247,529	\$ 325,022,793
Quality Assurance Related to Process Units	\$ 4,049,445	\$ 29,703,639	\$ 25,654,194	\$ 12,200,541
Quality Assurance Related to Hotel Load	2,313,760	16,971,983	14,658,222	6,778,078
Subtotal - Quality Assurance	\$ 6,363,205	\$ 46,675,622	\$ 40,312,416	\$ 18,978,619
Total Process Unit Direct Cost Growth	\$ 351,907,089	\$ 905,467,034	\$ 553,559,945	\$ 344,001,411
Hotel Load	\$ 799,014,425	\$ 1,612,646,690	\$ 813,632,265	\$ 361,644,231
Grand Total	\$ 1,150,921,514	\$ 2,518,113,724	\$ 1,367,192,210	\$ 705,645,643

A. Challenges On The Russian MFFF Caused DOE To Refuse MOX Services' Request To Conduct Process Unit Pilot Procurements

In September 2000, the United States and Russia executed the PMDA, under which each party agreed to dispose of at least 34 metric tons of surplus weapons grade plutonium from its nuclear stockpile.⁵⁴ A major tenet of the agreement was that the parties would “implement[] their respective disposition programs in parallel to the extent practicable.”⁵⁵ This “Russian parallelism” requirement has posed continued challenges to DOE and, by extension, to MOX Services. From the beginning, the United States’ demonstrated commitment to meeting the requirements of the PMDA has not been matched by Russia. As a result of the uncertainties arising from Russia’s lack of commitment, which MOX Services was powerless to affect, NNSA accepted the risks related to the requirement for Russian parallelism.

The PMDA did not dictate the technology each party was to use. Early on the United States decided to adapt the French MOX technology for use in the U.S. MFFF. For its MOX facility, for several years Russia planned to adapt existing equipment from a Siemens plant

⁵³ See Schedule 1.21.

⁵⁴ PMDA, Exhibit 1, art. II, ¶ 1.

⁵⁵ PMDA, art. II, ¶ 3.

located in Germany.⁵⁶ In early 2002, however, Siemens announced that it would dispose of its equipment differently and that it would no longer be available to the Russian MFFF.⁵⁷ Sent back to the drawing board, it was only after several months of discussions with the U.S. that, in December 2002, Russia too elected to adapt the French MOX technology for use in the Russian MFFF.⁵⁸

The driving factor behind Russia's decision to use the French MOX technology was to meet the "essential element" of the PMDA of keeping the Russian MFFF and the U.S. MFFF on "roughly parallel construction and operational schedules."⁵⁹ But, by this point in time, MOX Services had been working for over three years to Americanize the French designs, and, by no later than spring 2003, MOX Services was requesting authority to conduct pilot procurements of U.S. MFFF process equipment.⁶⁰

Russia's switch from using existing German equipment to adapting French technology that would have to be designed and built to Russia's particular needs was the first snag to hit the Russian MFFF which, in turn, caused DOE to slow down MOX Services. It was far from the last. Russia's determination to use the French technology necessarily meant that Russia would rely in large part on the engineering design work MOX Services had performed to date and would continue to develop. This in turn meant that Russian MFFF progress always would be behind that of the U.S. MFFF. This lag, in combination with the Russian parallelism requirement, caused DOE to exert a constant drag on MOX Services' efforts and progress.

Meaningful work on the Russian MFFF design could not begin until the United States and Russia agreed to a liability protocol for MOX Services' work in Russia. The negotiations were contentious and plodding.⁶¹ The countries completed negotiations on a

⁵⁶ Joint U.S.-Russian Working Group on Cost Analysis and Economics in Plutonium Disposition, Scenarios and Costs in the Disposition of Weapons-Grade Plutonium Withdrawn from Russia's Nuclear Military Program (Apr. 29, 2003) at Executive Summary iii ("Exhibit 25").

⁵⁷ *Id.*

⁵⁸ *Id.*

⁵⁹ *Id.* at Executive Summary at iii, Introduction at 3, n. 8.

⁶⁰ Letter DCS-DOE-001138 from T.E. Touchstone, Deputy Project Manager, Duke Cogema Stone & Webster, to Patrick Rhoads, MOX Fuel Program Manager, DOE (June 20, 2003) ("June 20, 2003 Letter") at 9 ("Exhibit 26").

⁶¹ DOE OIG, Audit Report DOE/IG-0713, Status of the Mixed Oxide Fuel Fabrication Facility (Dec. 2005) ("DOE/IG-0713") at 1 ("Exhibit 27"). This Audit Report states that the "disagreements regarding liability protection for U.S. companies performing work in Russia ... delayed construction of the U.S. facility." *Id.* It further concludes that the "Russian liability issue had a significant impact on the cost and schedule of the [U.S. MFFF] project." *Id.* at 2.

liability protocol in July 2005,⁶² but the agreement did not clear Russian bureaucratic channels for over a year. The liability protocol to the PMDA finally was signed on September 15, 2006.⁶³

The liability protocol delay drove DOE to handcuff MOX Services, lest the United States signal to Russia that our country's commitment to implementing the PMDA was no longer linked to Russia's commitment. Indeed, at the time DOE admitted, and the DOE Office of Inspector General ("OIG") agreed, that the Russian liability protocol impasse resulted in a 2½ year delay to the U.S. MFFF.⁶⁴ The most significant and impactful manifestation of the Russian parallelism requirement to date was that DOE refused to allow MOX Services to go forward with process equipment pilot procurements.

B. The Government Prevented MOX Services From Conducting Pilot Procurements For Over Four Years

1. 2003-2004: Citing the Need to Maintain Parallelism with the Russian MFFF, DOE Refuses to Authorize MOX Services to Conduct Pilot Procurements

Beginning in early 2003, MOX Services planned to conduct pilot procurements for process units. A vendor forum was planned for June 9-13, 2003, with interested subcontractors to obtain early industry feedback on the clarity and ease of use of process unit designs and input on fabrication coordination.⁶⁵ This objective was in answer to the identified risk attending the "Process Equipment Procurement" effort. Specifically, MOX Services believed that it faced potential difficulties in identifying capable manufacturers to fabricate and test the process units in both the mixed oxide and aqueous polishing portions of the MFFF. This risk was accorded the most critical rank of "Risk Management Level 1, High Priority."⁶⁶

DOE rejected MOX Services' pilot procurement requests. In a June 2003 "Procurement Workshop," DOE informed MOX Services that MOX Services could not conduct a pilot procurement because the U.S. government did not want to give the appearance that the development of the domestic MFFF was far ahead of the progress Russia

⁶² *Id.*

⁶³ NNSA Press Release, "U.S. and Russia Sign Liability Protocol" (Sept. 15, 2006) ("Exhibit 28").

⁶⁴ DOE/ID-0713, Exhibit 27, at 7.

⁶⁵ June 20, 2003 Letter, Exhibit 26, at 9.

⁶⁶ *Id.*

had achieved on its MFFF.⁶⁷ DOE placed all process unit procurements on indefinite hold until Russia proved its commitment to meeting its MFFF obligations. To maintain a rough parallelism with Russia, DOE not only forbade MOX Services from conducting pilot procurements but also demanded that MOX Services cancel its long-planned vendor forum designed to capture industry's feedback on its ability to manufacture the process units.⁶⁸ MOX Services was "not able to promote in a public manner the intent ... to go forward ... with procuring MFFF equipment" before the "direction of the Russian project firm[ed]."⁶⁹

DOE's refusal to allow MOX Services to move forward with procurement activities continued despite MOX Services' warnings that certain process units were on the MFFF critical path.⁷⁰ In January 2004, DOE indicated that it likely would not release MOX Services to conduct procurements for the entire calendar year, and DOE asked MOX Services to assess the impact of that eventuality.⁷¹ Demonstrating the importance of involving the vendor community in the design effort, in its February 2004 response to DOE's request, MOX Services repeated its previous admonitions to DOE that it was critical that MOX Services be allowed to conduct some procurement activity.⁷²

MOX Services proposed that NNSA allow it to enter into Blanket Ordering Agreements ("BOAs") with select process equipment vendors. MOX Services had two reasons for doing so. First, MOX Services sought "to obtain product information on vendor supplied components ... to support development of detail design of process units, systems or equipment."⁷³ MOX Services informed DOE that vendor feedback garnered from BOA relationships may result in "significant design changes," which would likely impact the designs of several process units.⁷⁴ MOX Services feared that DOE was forcing MOX Services to continue with the design of process units to a build-to-print level of specificity in a vacuum, prohibited by DOE from learning what the marketplace already offered. MOX Services urged DOE to free it to incorporate established designs and manufactured

⁶⁷ Letter DCS-DOE-001103 from T.E. Touchstone, Deputy Project Manager, Duke Cogema Stone & Webster, to Patrick Rhoads, MOX Fuel Program Manager, DOE (Sept. 18, 2003) at 1 ("Exhibit 29").

⁶⁸ *Id.* at 2.

⁶⁹ *Id.* at 1, 2.

⁷⁰ Duke Cogema Stone & Webster, MOX Fuel Fabrication Facility: DCS Recommendation to DOE for Acquisition of Process Units (July 29, 2003) ("DCS Recommendation") at 2 ("Exhibit 30").

⁷¹ Letter DCS-DOE-001486 from Ed Brabazon, Vice President, Duke Cogema Stone & Webster, to James V. Johnson, Technical Manager, DOE (Feb. 19, 2004) ("Exhibit 31").

⁷² *Id.*

⁷³ *Id.* at 1.

⁷⁴ *Id.* at 2.

components into the process units, rather than force MOX Services to continue its design work with blinders on.

Second, MOX Services reasonably believed that efficiently procuring the process units depended in large part on testing the capabilities of the marketplace. To this end, MOX Services requested that it be allowed to enter BOAs with certain vendors, under which MOX Services could release select designs “to be appropriately interfaced with the equipment.”⁷⁵ MOX Services set forth the reasoned justification that such pre-arrangements would result in an “improved price and reduced delivery time” once an order was placed.⁷⁶

MOX Services explained to NNSA that such limited activity would not involve any financial or procurement commitment but would allow MOX Services to obtain vendors’ engineering input without compromising the government’s fidelity to the PMDA’s Russian parallelism requirement. At this point, MOX Services had been working on the process unit designs for over three years, yet it had not yet been allowed to gather vendor feedback on the constructability of the designs or on industry’s capability to build the units to NRC’s quality standards.

Despite MOX Services’ insistence to NNSA that conducting early procurements would generate critical information to enable MOX Services to obtain the process equipment in a timely and cost-effective manner, NNSA continued throughout 2004 to refuse to allow MOX Services to proceed.

2. 2005-2007 Baseline: The Government Continues To Prohibit Pilot Procurements

In February 2005, to support DOE decision-making on the MFFF baseline, DOE directed MOX Services to participate on several joint review teams, including one focused on the process equipment acquisition strategy.⁷⁷ In April 2005, the joint DOE-MOX Services team released its final report, “MFFF Rebaselining Team – Process Equipment Acquisition Strategy.”⁷⁸ In the report, MOX Services again, and repeatedly, requested to be allowed to conduct a few early process unit procurements.⁷⁹

Specifically, MOX Services recommended that DOE allow it to proceed on four design-build units and two build-to-print units.⁸⁰ The recommendation was made under the

⁷⁵ *Id.* at 3.

⁷⁶ *Id.* at 1.

⁷⁷ Letter DCS-DOE-002125 from L.R. Barnes, President, Duke Cogema Stone & Webster, to Kenneth M. Bromberg, DOE (June 2, 2005) (“June 2, 2005 Letter”) at 1 (“Exhibit 32”).

⁷⁸ *Id.* at 3.

⁷⁹ *Id.* at vi, 37.

⁸⁰ *Id.* at E2-E3.

MFFF base contract because process equipment purchased in the normal course was slated to occur under MA17 of the Option 1 contract.⁸¹

MOX Services emphasized several benefits of the requested pilot procurements. The pilots would promote MOX Services' understanding of the market's capability to complete successfully the different types of design-build and build-to-print units. MOX Services also stated that the pilot procurements would provide applied indications of subcontractor costs and durations for process unit design and assembly, among other subcontractor feedback. Additionally, MOX Services noted that the initial procurements would establish a practical, tested baseline in anticipation of future procurements of the same type.⁸²

Throughout the Acquisition Strategy document, the DOE-MOX Services team identified continuing DOE-imposed constraints on MOX Services' procurement activity. For example, DOE hampered MOX Services' process unit design strategy by refusing to authorize MOX Services to pursue BOAs to set the parameters by which subcontractors could provide critical design input.⁸³ DOE also hindered MOX Services' ability to implement a cogent process unit assembly strategy by, among other things, refusing to release MOX Services to select vendors for any units.⁸⁴

Instead of allowing MOX Services to take the most logical and repeatedly requested approach of conducting pilot procurements, DOE limited MOX Services to assessing the capability and capacity of the marketplace through vendor questionnaires and visits. Notably, this effort did not include even attempting to capture information relevant to MOX Services' ability to generate accurate cost and schedule estimates.⁸⁵

Moreover, DOE severely limited MOX Services' ability to share information about the process units with prospective vendors. Thus, even if they wanted to, vendors could not provide MOX Services meaningful feedback to inform MOX Services' cost and schedule estimates. In order to obtain DOE approval to begin dialogs with potential vendors, MOX Services had to promise that it would not discuss Project details such as dates, quantities, drawings or budget, and that it would not issue any procurement documents.⁸⁶

DOE authorized MOX Services to engage potential contractors only after MOX Services assured the contracting officer that MOX Services would share only the barest

⁸¹ *See Id.* at E-1.

⁸² *Id.* at vi, 37, E1.

⁸³ *Id.* at 2-3, A-1 to A-2.

⁸⁴ *Id.* at A-4 to A-5.

⁸⁵ Letter DCS-DOE-002225 from Frank T. Haseltine, Vice President & Business Manager, Duke Cogema Stone & Webster, to Martin Newdorf, DOE (August 30, 2005) at 1 ("Exhibit 33").

⁸⁶ June 2, 2005 Letter, Exhibit 32, at 32.

parameters of the Project with vendors.⁸⁷ Specifically, MOX Services promised that it would limit the information it showed to vendors to photographs of certain process units, very rough estimates of the delivery schedule, verbal summaries of the units' size and weight, and a video of the MELOX facility.⁸⁸ Accordingly, the August 30, 2005 market assessment that formed the second part of the process equipment acquisition team's output exclusively addressed the supposed capability and capacity of the marketplace, and not the likely cost and duration of procuring the process units.

The MFFF maintained the status quo whereby MOX Services was prohibited from conducting process unit pilot procurements through its submission of its Option 1 proposal on March 16, 2006, and through the 2007 Project baseline. MOX Services finalized its Process Unit Estimating Methodology in October 2005 and submitted it to DOE as part of its Option 1 Basis of Estimate. Thus, the October 2005 estimates were carried forward into MOX Services' proposal. DOE authorized MOX Services' performance baseline (Critical Decision 2) and start of construction (Critical Decision 3) in the same document.⁸⁹ The performance baseline was authorized as of April 10, 2007, and the start of construction was authorized as of August 1, 2007.⁹⁰ Because DOE did not authorize process unit pilot procurements under the base contract,⁹¹ MOX Services entered the Option 1 Contract with completely untested process equipment estimates.

C. The Process Unit Estimates Necessarily Were Based On Insufficient Information

The March 2006 Option 1 proposal's process unit estimates were prepared without the benefit of the hard data that would have been generated by pilot procurements. This use of the generic methodology was made necessary by DOE's rejection of MOX Services'

⁸⁷ *Id.* at 35-36.

⁸⁸ *Id.* at 36.

⁸⁹ Letter from Clay H. Ramsey, Federal Project Director, NNSA to Dave Stinson, President and Project Manager, Shaw AREVA MOX Services, LLC, (April 24, 2007) Exhibit 34. The CD-2/3 approval was based on the Updated Minutes of the July 21, 2006 Energy Systems Acquisition Advisory Board meeting, which was attached to the authorization memorandum for CD-2/3. The Minutes noted that among the causes of the cost growth on the U.S. MFFF to that point was the 2½ year delay due to the Russian parallelism requirement and the "[u]nanticipated complexities" in adapting the French reference plant technology to use on weapons-grade plutonium in the United States under the NRC regulations.

⁹⁰ *Id.*

⁹¹ DOE authorized Critical Decision ("CD") 3B, "Critical Long Lead Procurements," in April 2006. *See* PEP, Exhibit 13, at 9. This allowed MOX Services to proceed with procurement of trapped equipment, which included various types of tanks. *Id.* at 10. But this limited authorization was not broad or early enough to provide the needed information relative to the process unit estimates.

repeated requests to conduct such early procurements.⁹² Thus, MOX Services had no as-applied data on this unique equipment on which to base its estimates, or at least to act as a check on the realism of estimates produced by substitute means.

When the United States and Russia agreed to a liability protocol in July 2005, the South Carolina congressional delegation began to assert tremendous pressure on DOE to begin MFFF construction, which included the process unit procurements. Responding to this political pressure, DOE required MOX Services to estimate the costs of the MFFF process units when the equipment and associated software design was only approximately 50% complete.⁹³

The consequences of DOE's refusal to allow MOX Services to conduct pilot procurements to generate accurate process unit estimates were made more acute by the lack of design information available to MOX Services. The Methodology evaluated two major cost variables to produce the cost estimate: (1) Labor and (2) Equipment and Materials.⁹⁴

The Cost Methodology for the Labor component used a "top down" approach for all 97 units.⁹⁵ This approach selected the simplest process unit of each of three types – glovebox, non-glovebox, and laboratory process unit – and then, using a variety of factors, estimated the amount of craft and non-craft labor that would be needed to build the unit.⁹⁶ MOX Services applied labor rates to the labor hours to produce Labor cost baselines,⁹⁷ and, using "complexity factors," extrapolated the baselines to all other units of the same type.⁹⁸

The Materials Methodology was similar to that of Labor. MOX Services chose representative units of each type and attempted to secure estimates for each type of subassembly that comprised the units (such as glovebox components) and purchased and fabricated parts.⁹⁹ Once the estimates were established for the reference units, these were

⁹² Contract No. DE-AC02-99CH110888 MOX Fuel Project Option 1 Proposal Submittal, Volume I, Introduction (March 15, 2006) (excerpts) and U.S. Department of Energy, Work Breakdown Structure Dictionary, Part II Element Definition, WBS Element Code 01, Capital and Operating and "Process Unit Cost Estimate Methodology" (October 10, 2005), Methodology at 1 (collectively "Exhibit 35").

⁹³ *Id.* at Option 1 Proposal 1-3.

⁹⁴ Exhibit 35, Methodology, at 1.

⁹⁵ *Id.* at Methodology 9.

⁹⁶ *Id.* at 8-9.

⁹⁷ *Id.*

⁹⁸ *Id.* at 9-10. The accuracy of the Labor estimate was further hampered by the absence of engineering drawings for the units that would provide the cost and schedule basis from which all other units would be drawn. *Id.* at 8.

⁹⁹ *Id.* at 23.

used to extrapolate materials costs to other units of the type “to the maximum extent possible,” again using multiple complexity factors.¹⁰⁰ But in this process, DOE prevented MOX Services from sharing sufficient information with vendors to enable them either to prepare estimates on complete process units or even to solicit estimates on Americanized versions of equipment.¹⁰¹

In short, the generic process unit estimating methodology MOX Services had to use was a poor substitute for one based on and applied in pilot procurements. The accuracy of the estimates depended on untested data on a handful of process units and extrapolated to the process units at large.

DOE was well aware of the potential consequences of the severe estimating constraints under which MOX Services was required to operate. The caveats concerning the reliability of the process unit estimates included in MOX Services’ Cost Estimating Methodology were underscored in the External Independent Review (“EIR”) of the CD 2/3 Baseline commissioned by DOE. Among other concerns, the EIR noted that the extrapolations were based on equipment designs that were not even half complete, and it thus recommended that budgetary quotes be obtained for all process units. The EIR also recommended that MOX Services’ estimates be considered merely “conceptual” and not “budgetary.”¹⁰² Overall, the EIR found MOX Services’ cost estimating methodology and overall plan for purchasing process equipment to be reasonable.¹⁰³ But, like MOX Services, the EIR team was severely limited in the review methodology DOE allowed it to pursue. The EIR stated that although its review plan “anticipated communication with domestic suppliers to determine the reasonableness of the estimates for planned domestic purchases,” DOE instructed the EIR “not to contact any vendors because it could potentially ‘compromise the procurement process’.”¹⁰⁴

D. MOX Services’ Increased Process Unit Costs Constitute Out-Of-Scope Work For Which MOX Services Is Entitled To Fee

As shown above, from early 2003 on, MOX Services repeatedly urged DOE to allow MOX Services to conduct process equipment pilot procurements. One of the express purposes of MOX Services’ requests was to obtain better indications of process unit subcontractor costs and schedule durations for completing the design, fabricating and

¹⁰⁰ *Id.* at 23, 26.

¹⁰¹ *Id.* at 24-25.

¹⁰² Burns and Roe Enterprises, Inc., External Independent Review of the Mixed Oxide Fuel Fabrication Facility (MFFF) Project Critical Decision 2/3 Baseline (BREI-LSP-R-06-03), for the U.S. Department of Energy (June 2006) (“EIR”) at 22 (“Exhibit 36”).

¹⁰³ *Id.* at 141-142.

¹⁰⁴ *Id.*

assembling, and testing and installing the units in a domestic context governed by strict NRC regulations.

It was ill-considered for DOE to require MOX Services to estimate the cost and schedule of the process units without the benefit of pilot procurements. The U.S. MFFF is an incredibly complex facility that will deploy unique technology on a great scale, and its design is governed by a strict set of NRC regulatory standards that were untried in the marketplace in which the process units would be fabricated. By preventing MOX Services from conducting pilot procurements to inform its estimates, DOE assumed the risk and the follow-on effects when those hamstrung estimates fell far short of reality.¹⁰⁵ In any event, the significant underestimates on the process units, in terms of discrete costs and schedule, fall within the Option 1 Contract provision whereby NNSA accepted risks related to the Russian parallelism requirement and limits the scope of the Contract to exclude all impacts resulting from that requirement.

1. NNSA Accepted the Risk of Shortfalls in the Process Unit Estimates

On June 6, 2005, MOX Services identified Risk #225 as the possible impact that the delay of the Russian MFFF could impose on the U.S. MFFF.¹⁰⁶ Risk #225 was labeled a “DOE Program Risk.”¹⁰⁷ Specifically calling out the then two-year delay of a United States-Russia liability protocol, Risk #225 observed that the time needed to work out this international agreement (as well as one on technology transfer) was uncertain.¹⁰⁸ The likelihood of the risk materializing was identified as “high,” and, indeed, the Russian MFFF had been behind the U.S. MFFF ever since the PMDA was executed in 2000.¹⁰⁹ MOX Services estimated the consequence of Risk #225 to be “severe” and, as a placeholder, estimated the risk to be 36 months.¹¹⁰

¹⁰⁵ This is so, even if DOE itself was obliged to deny MOX Services the ability to conduct pilot procurements for legitimate international diplomatic reasons. DOE may have imposed the restriction on pilot procurements in response to State Department insistence that the domestic MFFF not progress too far ahead of the Russian MFFF. The impetus is of no moment, however, as NNSA cannot, by pointing blame at another federal agency, escape the risk it assumed both contractually and by hobbling MOX Services’ estimating function.

¹⁰⁶ The risk’s “impacted scope” was stated to be “construction,” which included the procurement and installation of the process equipment.

¹⁰⁷ Letter DCS-DOE-002282 from Frank T. Haseltine, Jr., Vice President, Duke Cogema Stone & Webster, to Martin Newdorf, Federal Project Director, DOE (Oct. 13, 2005) (“Exhibit 37”).

¹⁰⁸ *Id.*

¹⁰⁹ *Id.*

¹¹⁰ *Id.*

In the Option 1 negotiations, MOX Services, in collaboration with NNSA, assigned values and responsibilities to the identified Project risks through the Technical and Programmatic Risk Assessment (“TPRA”) for Critical Decision 2 (approval of the performance baseline) and Critical Decision 3 (authorization of the remainder of construction activities). The CD 2/3 TPRA Rev. 3, issued in June 2006, assigned Risk #225 “zero dollar value” (and it was not included in the schedule risk recap) because it “[was] transferred and accepted by DOE.”¹¹¹

NNSA’s acceptance of the Russian parallelism risk was included in the Option 1 Contract, first in the MFFF Project Execution Plan, and then in the definitized Option 1. Section 4 of the PEP, “Project Definition,” “descri[bes] the MFFF Project elements, describes how they are related, and identifies the salient interfaces.”¹¹² As part of the Option 1 cost baseline, PEP (Rev. 4), issued in April 2007, provided that the former Risk #225 was a “Risk Outside Scope” that would not contribute to the calculation of the Project’s contingency calculations.¹¹³ The PEP stated the exclusion in very broad terms: “Risks related to the requirement for rough parallelism with the Russian program.”¹¹⁴

The PEP described this risk as “difficult or impossible to quantify” and acknowledged that it carried the possibility of “major impacts.”¹¹⁵ In the event that the risk of Russian parallelism materialized, NNSA agreed to “accept these risks and process a change to the project baseline should they occur.”¹¹⁶ In other words, the PEP expressly defined the MFFF Project to exclude from its scope any manifestations of risks related to Russian parallelism. In effect, the parties agreed that, if such risks materialized, NNSA would enter a new contract with MOX Services to cover what the PEP defined to be new scope. With this clearly defined risk allocation embedded in the contract, at the time of the 2007 Baseline negotiations there was no cause or reason for MOX Services to insist on an additional contract provision regarding the insufficiency of the information on which the process unit estimates were based.

The provision that NNSA would bear the risks related to the Russian parallelism requirement, and would treat such realized risks as new work scope, was carried forward into

¹¹¹ Duke Cogema Stone & Webster, MFFF Mixed Oxide Fuel Fabrication Facility, Technical and Programmatic Risk Assessment, Critical, Decision 2/3, Revision 3 (June 14, 2006) (“TPRA”) at 5 (“Exhibit 38”).

¹¹² PEP, Exhibit 13, at 23.

¹¹³ *Id.* at 28. Among other things, the PEP “defines and discusses technical, schedule, and cost baselines,” and it is the “living document” that governs the project. *Id.* at 4. The PEP also “defines how the project will be accomplished, resource requirements, technical considerations, and roles and responsibilities of the Integrated Project Team.” *Id.*

¹¹⁴ *Id.* at 28.

¹¹⁵ *Id.*

¹¹⁶ *Id.*

the definitized Option 1 Contract, signed in May 2008, which itself incorporated the language of the PEP.¹¹⁷ Option 1 expressly excluded “Risks related to the requirement for rough parallelism with the Russian program” from the parties’ estimated costs and negotiated fees.¹¹⁸ Option 1 sets forth four exceptions to MOX Services’ agreement that the fees will not increase, notwithstanding the changes clause. One of these exceptions is when the “Total Project Costs (TPC) are changed and the change is fee-bearing in accordance with the terms and conditions of this contract.”

This provision then states that, “as described in the Project Execution Plan, a change rebaseline of the TPC may result when certain Project risks which are not included in the calculations of Project Costs occur.”

In short, just as the PEP excluded Russian parallelism risk from the Option 1 work scope, the Option 1 definitization did not include the risk in the calculated costs of the Project. And, of course, any contract modifications that were needed to pay for these realized risks would be “fee-bearing in accordance with the terms and conditions of [the] contract,” because under the changes clause added scope is entitled to fee. FAR § 52.243-2.

2. The Shortfalls in the Process Equipment Costs and Schedule Estimates Are Realized Risks “Related to” the Russian Parallelism Requirement

Contract interpretation begins with an examination of the plain language of the contract, which, if unambiguous on its face, controls and ends the inquiry. *LAI Services, Inc. v. Gates*, 573 F.3d 1306, 1314 (Fed. Cir. 2009); *Hunt Constr. Gp., Inc. v. United States*, 281 F.3d 1369, 1373 (Fed. Cir. 2002). Here, the inquiry need go no further because, plainly read, the breadth of the phrase “related to” encompasses the nexus between the Russian parallelism requirement and the risk that the process unit estimates would not accurately reflect their costs and schedule.

As an initial matter, the ordinary meaning of “relate” is broad and is defined to mean “to stand in some relation; to have a bearing or concern; to pertain; refer; to bring into association with or connection with.” Black’s Law Dictionary 1288 (6th Ed. 1990). The

¹¹⁷ Mod 124, Exhibit 2, at B.4(a)(iii). The Mod 124 definitization of Option 1 occurred before MOX Services could award any subcontracts for process equipment pilot procurements.

¹¹⁸ A plain reading of the Russian parallelism provisions do not limit the risk allocation only to new causes that arose after contract execution; the provisions equally apply to later-arising impacts from past causes. *McAbbe Const., Inc. v. United States*, 97 F.3d 1431, 1435 (Fed. Cir. 1996) (clear, unambiguous contract terms must be accorded their plain meaning). That the under-informed process unit estimates could prove to be inadequate was hanging fire at the time of the 2007 Baseline. That is, whether the risk would in fact materialize was unknowable, and the Russian parallelism provisions squarely added all related fee risk to the cost risk that was already on the Government by virtue of the contract type.

U.S. Supreme Court has observed that the plain meaning of the phrase “relating to” is “broad.” *Morales v. Trans World Airlines, Inc.*, 504 U.S. 374, 383 (1992); see *Pilot Life Ins. Co. v. Dedeaux*, 481 U.S. 41, 47 (1987) (characterizing the term “relate to” as “deliberately expansive”); *FMC Corp v. Holliday*, 498 U.S. 52, 58 (1990) (stating that the term “relate to” is “conspicuous in its breadth”).

In deciding a matter of contract interpretation, the Federal Circuit has noted that “[i]n general, ‘related to’ means one thing has some ... connection to another thing.” *Tyco Healthcare Group LP v. Ethicon Endo-Surgery, Inc.*, 587 F.3d 1375, 1378 (Fed. Cir. 2009). The court further noted that “[i]n legal parlance, ‘related’ takes meanings with similar breadth.” *Id.* at 1379; see *Coregis Insurance Co. v. American Health Foundation, Inc.*, 241 F.3d 123, 128-29 (2d Cir. 2001) (Sotomayor, J.) (noting that the term “‘related to’ ... is not necessarily tied to the concept of causal connection” and holding as a matter of law that the phrase’s use in an insurance contract unambiguously excluded coverage).

Here, the risk that the process unit estimates would not reasonably reflect the costs or time required to procure the process units is “related to” the Russian parallelism requirement. For years, DOE refused MOX Services’ requests to conduct pilot procurements out of concern that doing so would violate the PMDA by implementing the U.S. MFFF far ahead of the Russian MFFF. As a result, MOX Services had to use untested, generic estimating methodology on unique equipment, rather than what it sought – real world application of the designs in a vendor’s fabrication and assembly environment. The Option 1 Contract protected MOX Services from the possibility that the generic estimates would fall far short of the discrete costs and schedule durations needed by excluding from the Contract’s scope risks “related to” the Russian parallelism requirement.

Given that this was a cost-type contract, DOE agreed that it would pay MOX Services’ allowable costs, including those that exceeded costs. See generally FAR Subpart 31.2. There was no reason to call out the allocation of cost risk specifically with respect to Russian parallelism. Thus, the “Russian parallelism” risk called out in the contract referred to fee risk, not cost risk. See *Muniz v. United States*, 972 F.2d 1304, 1320 (Fed. Cir. 1992) (citing as a “cardinal rule of contract interpretation” to give meaning to all terms in a way that does not render provisions “useless” or “superfluous”).

E. Impact

The generic estimating methodology produced systematic underestimates in terms of discrete costs (how much it cost to manufacture the process units) and Hotel Load costs (how long the process units would take to build, and thus cause prolonged Project support costs that are not tied to a particular end product). Pre-Option 1 pilot procurements would have provided MOX Services critical cost and schedule information and would have revealed the estimates produced by generic means to be unrealistically low. This was proven when DOE finally authorized MOX Services to conduct pilots.

If DOE had allowed MOX Services to conduct the pilot procurements in 2003 or 2004, MOX Services would have known that the process unit cost estimates determined

through generic means were much too low and the schedule estimates far too short. MOX Services would have adjusted the estimates accordingly, and the negotiated fee would have been augmented based on those higher estimates.

1. MOX Services' Pilot Procurements Revealed That the Process Unit Estimates Were Unrealistically Low

Despite MOX Services' requests for authority to conduct process unit pilot procurements beginning in early 2003, DOE did not authorize this activity until 2007.¹¹⁹ These pilot procurements came too late to impact the Option 1 cost estimates which, with modest adjustments, were carried forward into the 2007 Baseline and the definitized Mod 124 in May 2008.

Beginning in late 2007, MOX Services piloted two of the simplest glove box process units, the Pellet Repackaging ("PAD") and Scrap Box Loading ("PAR") units. The information generated from these pilots was profound and bracing. Among other things, the pilots revealed a tremendous shortfall in the process unit cost and schedule estimates. MOX Services learned that actual costs for completing the design and building the units would be much greater and would take much longer.

Under the generic estimating methodology MOX Services was forced to employ in lieu of pilot procurements, the PAD and PAR units together were estimated to cost \$1,149,324, not including Title III engineering. The actual cost of these two units was \$4,160,989 – a variance of over 250%.

Chart III.2, PAD / PAR Cost Growth¹²⁰

Cost Account	Cost Account Description	[A] 2007 Baseline	[B] 2012 Rebaseline with Addendum (Actual Costs)	[C] = B - A Cost Growth	[D] = C / A Percent Variance
1708.8748	PAD	\$ 594,028	\$ 2,114,547	\$ 1,520,519	256%
1708.8749	PAR	\$ 555,296	\$ 2,046,442	\$ 1,491,146	269%

Further, the PAD and PAR units took approximately 70% longer to manufacture and test than had been estimated and included in the 2007 Baseline.¹²¹

¹¹⁹ See April 24, 2007 Letter, Exhibit 34 (authorizing construction activity to begin on August 1, 2007). When DOE authorized Option 1 construction activity, the documentation supporting this decision noted that the U.S. MFFF had been delayed 2½ years due to Russian parallelism concerns.

¹²⁰ See Schedule 3.11.

Chart III.3, PAD Schedule Variance

PAD Delay Measurements (2007 Baseline vs. January 2012 Update)									
No.	Delay Issue	As-Planned			As-Built			Variance	
		Start	Finish	Duration	Start	Finish	Duration	Var	% Var
1	Process Unit Manufacturing	2/9/09	3/15/10	400	7/30/08	5/28/10	668	268	67.00%
2	In-Advance Testing / Ship	3/16/10	6/11/10	88	5/29/10	10/29/10	154	66	75.00%
	Total			488			822	334	68.44%

Chart III.4, PAR Schedule Variance

PAR Delay Measurements (2007 Baseline vs. January 2012 Update)									
No.	Delay Issue	As-Planned			As-Built			Variance	
		Start	Finish	Duration	Start	Finish	Duration	Var	% Var
1	Process Unit Manufacturing	3/25/09	3/31/10	372	7/30/08	10/31/09	459	87	23.39%
2	In-Advance Testing / Ship	4/1/10	7/2/10	93	11/1/09	9/24/10	328	235	252.69%
	Total			465			787	322	69.25%

The PAD and PAR procurement was explicitly designed to be a pilot procurement. MOX Services chose “to pilot these units ... based on their small size and relative simplicity in comparison to other process units.”¹²² Throughout the pilot, MOX Services endeavored to capture the pitfalls and successes in the context of an actual process unit procurement in order to assess and test, among other things, the accuracy, usability and completeness of the designs, and the constructability of the units to the NRC standards.¹²³

The subcontract to fabricate and assemble the PAD and PAR process units was awarded on September 18, 2008, and the units were delivered to the MFFF site on or about August 2009. On September 24, 2010, MOX Services issued “PAR/PAD Process Unit Fabrication, Assembly, and Test Pilot Project: Lessons Learned/Process Improvement Report.”¹²⁴ The Report includes a staggering 67 distinct Lessons Learned, grouped into seven areas that cover the entire procurement process – from the unit designs to soliciting and selecting a vendor, fabrication, and assembly and testing, through project controls and management.

¹²¹ The as-built dates and duration calculation are taken from the January 29, 2012 Schedule Update in MOX Services’ integrated Project schedule developed in Primavera P6 Professional Project Management.

¹²² Chris Livingston, LL-2010-251, PAR/PAD Process Unit Fabrication, Assembly, and Test Pilot Project: Lessons Learned/Process Improvement Report (Sept. 24, 2010) (“Pilot Procurement Lessons Learned”) at 3 (“Exhibit 39”).

¹²³ *Id.*

¹²⁴ *Id.* MOX Services incorporated the lessons from the PAD/PAR pilot into later process equipment solicitations. *Id.* at 4.

Moreover, the independent, DOE-commissioned “Root Cause Analysis of Cost Increases” on the MFFF, issued in May 2014, echoes many of the same themes as the Lessons Learned. The similarities among the two studies are telling in two respects. First, while the Lessons Learned was focused on prospectively addressing challenges in procuring process units, the Root Cause Analysis (“RCA”) retrospectively examined the cost increase drivers and the underlying causes of the cost increases. That the RCA discusses many of the same problems that were revealed in the Lesson Learned four years earlier establishes that, had the pilot procurements been conducted years earlier, the resulting higher cost estimates would have had a sounder basis than those based on the under-informed methodology MOX Services was required to use.

Second, the RCA was issued approximately 3½ years after the Lessons Learned and examined the completed or in-process procurements of dozens of process units. The similarities of the causes in the later document to the lessons of the earlier one establishes that, even though the Lessons Learned applied to only two of the smallest, simplest units, the lessons from that exercise accurately could be exported to all of the process units. Therefore, the RCA strongly supports the conclusion that had DOE allowed MOX Services to conduct pilot procurements in 2003-04 (even on the very limited scale of the PAD/PAR pilot), the overall process unit cost and schedule estimate would have been much greater.

Virtually all of the lessons from the PAD/PAR pilot procurement have obvious cost and/or schedule implications, as confirmed in the Root Cause Analysis. A sample of the lessons learned and their analogs in the RCA follows.

PAD/PAR Design Lessons. Among the several design lessons, the pilot produced many more engineering change requests than anticipated, which triggered MOX Services to increase its Title III engineering staff.¹²⁵ Had MOX Services conducted the pilot in 2003-04, the pilot would have highlighted the need for additional Title III resources and the difficulties and expense of implementing the French reference plant designs in the United States. The pilot beginning in late 2007 also revealed the need to revise commercial grade item evaluations and to create commercial grade acceptance requirements.¹²⁶ It uncovered the need to augment MOX Services’ QA staff to help vendors meet the applicable quality requirements. Additionally, when DOE finally allowed MOX Services to conduct a pilot, MOX Services discovered that some glovebox tolerances could be relaxed without compromising safety or functionality.¹²⁷ Because this lesson was delayed, MOX Services had to revisit the tolerances applicable to all gloveboxes, causing what would have been avoidable rework.

The RCA cites many of the same difficulties, unaccounted for in the Option 1 estimate and definitization, with respect to the process unit designs. Regarding the difficulty

¹²⁵ Pilot Procurement Lessons Learned, Exhibit 39, at 8.

¹²⁶ *Id.*

¹²⁷ *Id.* at 9.

of translating the French reference plant designs to the domestic MFFF, the study states that the Project “had an overly optimistic view of the ... level of effort required to complete the design, which was the result of the misconception that the French design could be directly applied to the MFFF.”¹²⁸

Further, like the Lessons Learned, the RCA cited the difficulty encountered in identifying vendors that could meet the applicable nuclear quality standards. The Analysis states that the cost estimate “did not consider all of the costs for completing the design, procurement of materials and equipment to NQA-1 standards.”¹²⁹ This pitfall, underappreciated at the time of the Option 1 proposal but evident in the PAD/PAR pilot, was accorded a separate section in the RCA. The Analysis is nearly identical to the Lessons Learned on this point. It states that the estimate fell short by underestimating the “added cost charged by vendors to meet NQA-1 requirements,” and that MOX Services’ costs for assisting vendors in meeting nuclear standards “was also not properly accounted for in the CD-2/3 cost estimate.”¹³⁰

The RCA also cites as a cost increase driver the overly tight tolerances that emerged from a direct replication of the French design to the domestic context. According to the Analysis, such “tolerances often proved unrealistic” for domestic vendors that were not accustomed to them.¹³¹

The repeated theme of the RCA regarding design issues is not that MOX Services failed to perform well or to properly supervise its vendors, but that the difficulties of replicating the French design in the U.S. simply were not understood at the time of the Option 1 cost estimate. The similarity of the Lessons Learned to the RCA on these issues means that had MOX Services been allowed to conduct pilot procurements in 2003-04, what would later become cost increases would have been captured in the original cost estimate.

¹²⁸ Parsons, Longenecker & Associates, Root Cause Analysis of Cost Increases, Mixed Oxide Fuel Fabrication Facility and Waste Solidification Building, Savannah River Site, South Carolina, (May 23, 2014) (“RCA”) at 2-8, 2-17 (stating that the belief that the French design easily could be adapted to the domestic MFFF “proved to be inaccurate and significantly underestimated the effort and costs required to Americanize the French design”) (“Exhibit 18”).

¹²⁹ *Id.* at 2-12.

¹³⁰ *Id.* at 2-21; *see* DOE publication “NQA-1: An Overview for Federal Project Directors” at p. 12 (MFFF Federal Project Director Clay Ramsey stating that process equipment and construction vendors failed to appreciate how stringent NRC’s regulations are, and that, as a result, “A lot of unplanned effort has had to go into both the coaching and instruction of these suppliers, and the monitoring and oversight and additional inspection to make sure we’re getting what we’re supposed to get”) (“Exhibit 18”).

¹³¹ RCA, Exhibit 18, at 2-18.

PAD/PAR Procurement Lessons. In vetting prospective vendors for the PAD/PAR units, MOX Services learned that many of them were not nearly as qualified as they had represented to MOX Services during the 2005 market assessment.¹³² The pilot procurement revealed that, in fact, there was inadequate capability and capacity in the vendor community to provide the process units to the NRC's NQA-1 standards. If MOX Services had learned this before Option 1, it would have included in its estimate additional resources to assess vendors and assist them to meet quality standards. Also, it is a basic tenet of economics that lower supply with the same demand equals higher prices. It stands to reason, then, that MOX Services would have submitted higher process unit cost estimates upon realizing that the smaller universe of truly qualified process unit vendors would have more leverage in subcontract negotiations.

The Root Cause Analysis also observes that the capability of the vendor community to produce equipment to nuclear quality levels was weakened by decades of disuse. The Analysis acknowledges what was revealed in the PAD/PAR procurement: (1) the Project had difficulty finding vendors with demonstrated nuclear quality assurance programs to bid on work; (2) the bids of qualified vendors were much higher than expected; and (3) even capable process unit vendors had inadequate document management processes.¹³³

PAD/PAR Fabrication & Assembly Lessons. The pilot procurement unearthed a host of expensive fabrication and assembly challenges. These problems arose throughout the equipment procurement cycle, from solicitation preparation and vendor selection, through fabrication and assembly, and to documenting quality conformance before shipping finished equipment.

Among the cost- and time-intensive challenges that were not anticipated before the PAD/PAR pilots, MOX Services learned that the robustness of prospective vendors' NQA-1 programs was difficult to verify. In response, MOX Services added QA staff to the statement of work and vendor selection processes, with the goals to more efficiently process statements of work and to try to affirm vendors' abilities to meet NQA-1 standards.¹³⁴ The Root Cause Analysis validated this finding from MOX Services' initial procurement and concluded that had MOX Services anticipated the atrophy in vendors' NQA-1 programs, "the problems encountered due to lack of material and equipment availability in support of construction could have been prevented or mitigated." Such augmentation of QA staff would be costly, of course, but with the pilot procurements stalled until so late in the contract, these costs were not incorporated in the Option 1 estimates.

The Lessons Learned also revealed that MOX Services lacked the staff that would enable it quickly to address vendor assembly problems. Through the PAD/PAR pilot, MOX Services determined that, by adding field engineers at vendor shops, it could more timely

¹³² Pilot Procurement Lessons Learned, Exhibit 39, at 10-11.

¹³³ RCA, Exhibit 18, at 2-21 to 2-22.

¹³⁴ Pilot Procurement Lessons Learned, Exhibit 39, at 15.

address many of the fabrication and assembly issues that arose, rather than requiring production to stop while the vendor could consult with MOX Services engineers back at the Savannah River Site.¹³⁵ MOX Services also realized that, to remedy vendor misunderstandings as to nuclear industry requirements, it had to train vendors and add nuclear-experienced personnel to the process unit team.¹³⁶

The RCA echoed these fabrication lessons learned. The Analysis concluded that inadequate field engineering resources had been deployed on the MFFF and that this resulted in added costs when applied design changes on procured equipment could not keep pace with the Project's design evolution.¹³⁷ Consistent with the Lessons Learned document regarding other cost drivers of the MFFF Project, before the PAD/PAR pilot, MOX Services had no way of anticipating that more field engineers would be needed, and these added costs were not included in the Option 1 estimate or its definitization.

Moreover, the RCA, like the Lessons Learned, recognized the inefficiency inherent in requiring vendors to conduct long-distance exchanges with MOX Services in order to address design problems. The RCA noted that the "exchange with vendors over design problems and solutions was a time-consuming and costly design issue and appears to be a significant factor in the increased cost and schedule delays with equipment procurement."¹³⁸ Again, the necessary costs and time of performing this additional work was not factored into the Option 1 estimates.

The Lessons Learned showed that additional MOX Services QA personnel had to be deployed to vendor shops following fabrication to ensure that the NQA-1 documentation required by NRC was complete and correct before equipment was shipped to the MFFF.¹³⁹ Similarly, the RCA acknowledged the reduced effectiveness of vendors' NQA-1 programs and the need for unexpected funds to improve the vendors' abilities in this regard. As did the Lessons Learned, the RCA approved of MOX Services' decision to "provide direct in-shop assistance to vendors in implementing their NQA-1 programs," including assisting in training and reviewing and approving vendors' NQA-1 implementing procedures.¹⁴⁰ The Analysis found that the "need to provide such services were not anticipated when the CD-2/3 cost estimate was developed."¹⁴¹

¹³⁵ *Id.* at 12.

¹³⁶ *Id.* at 12-13.

¹³⁷ RCA, Exhibit 18, at 2-24 to 2-25.

¹³⁸ *Id.* at 2-18 to 2-19.

¹³⁹ Pilot Procurement Lessons Learned, Exhibit 39, at 14.

¹⁴⁰ RCA, Exhibit 18, at 2-22.

¹⁴¹ *Id.*

Last, cost-increasing and schedule-prolonging problems with the process equipment were revealed when MOX Services assembled the PAD and PAR units at MOX Services' assembly facility at the MFFF site. The PAD/PAR pilot showed that assembly craft workers at the Process Unit Assembly Facility ("PAF") required a greater skill set than anticipated and thus required additional training or could demand higher wages, or both.¹⁴² The RCA confirmed this lesson, concluding that craft labor with nuclear experience could demand higher hourly rates and overtime opportunities.¹⁴³

2. Through April 2013 MOX Services Incurred \$344,001,411 in Discrete Out-Of-Scope Costs Related to the Russian Parallelism Requirement

MOX Services has experienced significant additional scope from that included in the Option 1 Contract. To estimate the impact of this out-of-scope work, MOX Services has compared the estimates set forth in the 2007 Baseline to those in the 2012 Rebaseline with Addendum.¹⁴⁴ Of the resulting amount of \$543,116,396 in discrete out-of-scope costs related to the Russian parallelism requirement, MOX Services here claims fee on the incurred amount through April 2013, \$344,001,411, as set forth in the following chart.

¹⁴² Pilot Procurement Lessons Learned, Exhibit 39, at 18.

¹⁴³ RCA, Exhibit 18, at 2-26.

¹⁴⁴ It is appropriate and reasonable for this Claim to measure the impact by comparing the 2007 Baseline to the 2012 Rebaseline with Addendum. The 2007 Baseline carried forward the estimates contained in MOX Services' Option 1 proposal, and the 2012 Rebaseline is the last comprehensive EAC that reflects a full funding profile through Project completion. In other words, the best estimate of the out-of-scope process unit-related costs are those developed for the 2012 Rebaseline, which incorporates approximately 4½ years of Project experience and significant hard data (actuals) from the 2007 Baseline.

Chart III.5, Direct Process Unit Cost Growth¹⁴⁵

Category Description	[A]	[B]	[C] = B - A	[D]
	2007 Baseline	2012 Rebaseline with Addendum	Cost Growth	Incurred Claim Growth Through April 2013
Process Unit Fabrication	\$ 234,510,584	\$ 589,956,954	\$ 355,446,370	\$ 248,271,175
Process Unit Assembly, Materials, and Supervision	83,887,205	185,032,060	101,144,856	66,010,765
Process Unit Title III Engineering	27,146,095	83,802,398	56,656,303	10,740,852
Subtotal	\$ 345,543,884	\$ 858,791,412	\$ 513,247,529	\$ 325,022,793
Quality Assurance Related to Process Units	\$ 4,049,445	\$ 29,703,639	\$ 25,654,194	\$ 12,200,541
Quality Assurance Related to Hotel Load	2,313,760	16,971,983	14,658,222	\$ 6,778,078
Subtotal - Quality Assurance	\$ 6,363,205	\$ 46,675,622	\$ 40,312,416	\$ 18,978,619
Total Process Unit Direct Cost Growth	\$ 351,907,089	\$ 905,467,034	\$ 553,559,945	\$ 344,001,411

The following sections describe each of the categories of process unit-related direct costs on which MOX Services incurred additional costs. MOX Services is entitled to payment of fee by the government on these out-of-scope costs. The discrete cost impacts of this added scope appear in four specific categories, each directly related to process unit construction engineering and manufacturing: (1) fabrication, (2) assembly, (3) Title III Engineering, and (4) Quality Assurance.

a. Costs of added scope for process unit fabrication incurred through April 2013

Process Unit Fabrication refers to costs associated with planning, manufacturing, and process unit installation support to the construction of the MFFF.¹⁴⁶ The claimed out-of-scope and fee-bearing costs for the fabrication of process units claimed here is the incurred portion through April 2013 of the difference between their estimates set forth in the 2007 Baseline and in the 2012 Rebaseline with Addendum. The attached Schedules 1.211 and 3.1 and supporting Schedules referenced therein show MOX Services' claimed cost growth related to the vendors' costs to fabricate the process units.

The cost of the added scope for Process Unit Fabrication is contained in Functional Areas 1701-1715 and 1745, and is summarized in the attached Schedules 1.211 and 3.1. In the 2012 Rebaseline with Addendum, MOX Services estimated that the added scope for the fabrication of process units would cost \$355,446,370¹⁴⁷ – 152% more than the 2007 Baseline estimate. As shown above, the pilot program for the PAD and PAR process units revealed an

¹⁴⁵ See Schedule 1.21.

¹⁴⁶ Proposal 12-004, Exhibit 4, at WBS Definitions 8704, 8750, 8764, and 8782.

¹⁴⁷ See Schedule 1.21.

out-of-scope cost variance of 250% over the 2007 Baseline. If the pilot procurements had been conducted before the Option 1 estimate, MOX Services reasonably could have increased its cost estimate to reflect this variance. Armed with the knowledge of the true difficulty of Americanizing the French reference plant designs,¹⁴⁸ MOX Services reasonably could have estimated that it would cost \$821 million or more to fabricate the process units.¹⁴⁹

The delta, or incurred claimed out-of-scope work, between the 2007 Baseline and the 2012 Rebaseline with Addendum for process unit fabrication as of April 2013 is \$258,139,470. But here, MOX Services claims entitlement to additional fee on only \$248,271,175 of this amount. This \$9,868,295 downward adjustment (plus additional ongoing costs that accrue after the preparation of this Claim) primarily represents the increased costs associated with the deferment of work by vendors on 23 contracts.¹⁵⁰

b. Costs of added scope for process unit assembly, materials, and supervision

Process Unit Assembly, Materials and Supervision includes the costs for materials, labor and overhead associated with each of the process units assembled in the PAF.¹⁵¹ Through April 2013, the incurred cost of the added scope in this category is \$66,586,020, and is detailed, by cost account, in Schedule 1.212 and the Supporting Schedules referenced therein. Of this amount, \$49,619,367 consists of (1) purchased equipment components, such as glove ports, window panels, and fasteners, and (2) finished equipment subsystems, such as pellet presses, homogenizers, conveyors, hoppers, and pellet grinders.¹⁵² The remaining

¹⁴⁸ It bears repeating that the PAD and PAR units were chosen for the eventual pilot procurements because they were among simplest process units. Pilot Procurement Lessons Learned, Exhibit 39, at 3.

¹⁴⁹ Extrapolating to all process units the 250% variance encountered on the PAD and PAR units to the estimates generated on all process units would produce an estimate of well over \$800 million. ($\$234,510,584 \times (1 + 250\%) = \$820,787,044$.)

¹⁵⁰ Additionally, MOX Services has deducted \$38.4 million from the total cost variance for process unit work scope that MOX Services inadvertently omitted from the Option 1 estimate. PCN 08-0211, dated December 8, 2008, identified \$44.5 million in costs associated with specific process units that were mistakenly not included in Option 1. As of the 2012 Rebaseline with Addendum, the cost accounts associated with these process units showed these estimates revised down to \$38.4 million. As of the 2012 Rebaseline with Addendum, the cost accounts associated with the process units showed cost growth in the amount of \$38.4 million. Because these costs cut across multiple cost accounts, this reduction is taken at a bottom line.

¹⁵¹ Proposal 12-004, Exhibit 4, at WBS Definitions 8601, 8602, 8791, and 8795. These costs include materials procured under BOAs and those classified as Long Lead Procurements. *Id.* at WBS Definition 8791.

¹⁵² *Id.* at WBS Definition 8795.

\$16,966,653 in this category consists of MOX Services' labor and overhead costs for the Process Unit Design and Commissioning ("PUDC") Group, including supervision, administrative support, project controls, and PAF construction.¹⁵³ MOX Services claims entitlement to fee on \$66,010,765 in out-of-scope work in this category.

MOX Services estimates it incurred these out-of-scope costs due to increased vendor costs to manufacture materials used in the assembly of process units and the vendors' inability efficiently to perform the assembly scope of work. In order to mitigate these out-of-scope costs, MOX Services established the PUDC Group to provide vendor oversight, to provide rapid responses to vendor questions occasioned by the challenges presented by the unique process unit requirements of the Project, and to self-perform some of the process unit assembly. In addition, MOX Services built the PAF to house this work, which itself incurred modest cost increases.¹⁵⁴

c. Costs of added scope for process unit Title III Engineering

Process unit Title III Engineering refers to, among other things, engineering support for process unit fabrication, resolution of design issues, and engineering supervision for process unit installation by the construction group.¹⁵⁵ MOX Services estimates that as of April 2013 it incurred out-of-scope costs of \$10,740,852 for these services. The attached Schedule 1.213 summarizes MOX Services' out-of-scope costs by cost account for Process Unit Title III engineering.

The amount claimed here reflects out-of-scope costs resulting both from needing more process unit Title III engineers to be on the Project and from needing them longer than estimated in the 2007 Baseline. Both of these impacts were identified from the PAD and PAR pilot programs.¹⁵⁶ The 2007 Baseline estimated that the Project would require \$27,146,095 in process unit Title III engineering over the course of six years. But, as of the 2012 Rebaseline with Addendum, MOX Services estimated that these services would require \$83,802,398 over a period of ten years.¹⁵⁷

d. Costs of added scope for Quality Assurance for process units

MOX Services incurred \$18,978,619 in out-of-scope, self-performed quality assurance (QA) work and hotel load specifically related to process units.¹⁵⁸

¹⁵³ *Id.* at WBS Definitions 8601, 8602, 8645, 8785, and 8795.

¹⁵⁴ *Id.* at WBS Definition 8785.

¹⁵⁵ *Id.* at WBS Definitions 8033, 8043, and 8056.

¹⁵⁶ Pilot Procurement Lessons Learned, Exhibit 34, at 8.

¹⁵⁷ *See* Schedule 1.21.

¹⁵⁸ The QA cost accounts are based on QA function, not the construction function on which QA services in question are performed. As a result, the characterization and allocation of

The September 2010 PAD and PAR Lessons Learned noted that quality control at the vendor shops was inadequate, resulting in conformance issues after receipt of the process units at MOX Services. Specifically, the Commercial Grade Item Evaluations and the Commercial Grade Acceptance Requirements were poorly understood by vendors, resulting in non-conformance reports upon receipt of the process units.¹⁵⁹ In order to remedy these issues at the vendor shops, the Lessons Learned called for QA to be involved at the vendor locations to perform physical checks on the process units and to conduct final document review for NQA-1 compliance on the equipment to be shipped.¹⁶⁰ Additionally, the Lessons Learned stated that the lack of QA involvement in the Statement of Work (“SOW”) review process resulted in unnecessary delays. This resulted in QA taking responsibility for the SOW documents and signing off on them during the preparation phase of the work.

3. Through April 2013, MOX Services Incurred \$361,644,231 in Additional Hotel Load Related to the Russian Parallelism Requirement

Over half of MOX Services’ added work scope between the 2007 Baseline and the 2012 Rebaseline with Addendum is due to delays in the process unit procurement cycle. The critical path of the MFFF was controlled by the process units from the 2007 Baseline through the funding constraints applied during the development of the 2012 Rebaseline with Addendum. MOX Services estimates the government is responsible for \$781,849,714 in time-related costs¹⁶¹, occasioned by the approximately 42 month schedule extension that these delays caused. Of this amount, \$361,644,231 was incurred through April 2013, and MOX Services currently is entitled to fee on this incurred cost growth.

QA cost growth is based on estimates provided by MOX Services’ QA personnel. Thus, while MOX Services knows it experienced \$67,780,782 in cost growth on QA cost accounts, it estimates the allocation of that growth to process units (\$12,200,541), hotel load (\$6,778,078), and construction effort (\$48,802,163), based on the percentage of each QA cost account that MOX Services personnel attributed to those categories. *See* Schedule 1.214.

¹⁵⁹ Pilot Procurement Lessons Learned, Exhibit 39, at 8.

¹⁶⁰ *Id.* at 14-15.

¹⁶¹ *See* Schedule 1.21.

Chart III. 7, Hotel Load Process Unit Cost Growth¹⁶²

	[A]	[B]	[C] = B - A	[E]
Category Description	2007 Baseline	2012 Rebaseline with Addendum	Cost Growth	Incurred Claim Growth Through April 2013
Hotel Load	\$ 799,014,425	\$ 1,612,646,690	\$ 813,632,265	\$ 361,644,231

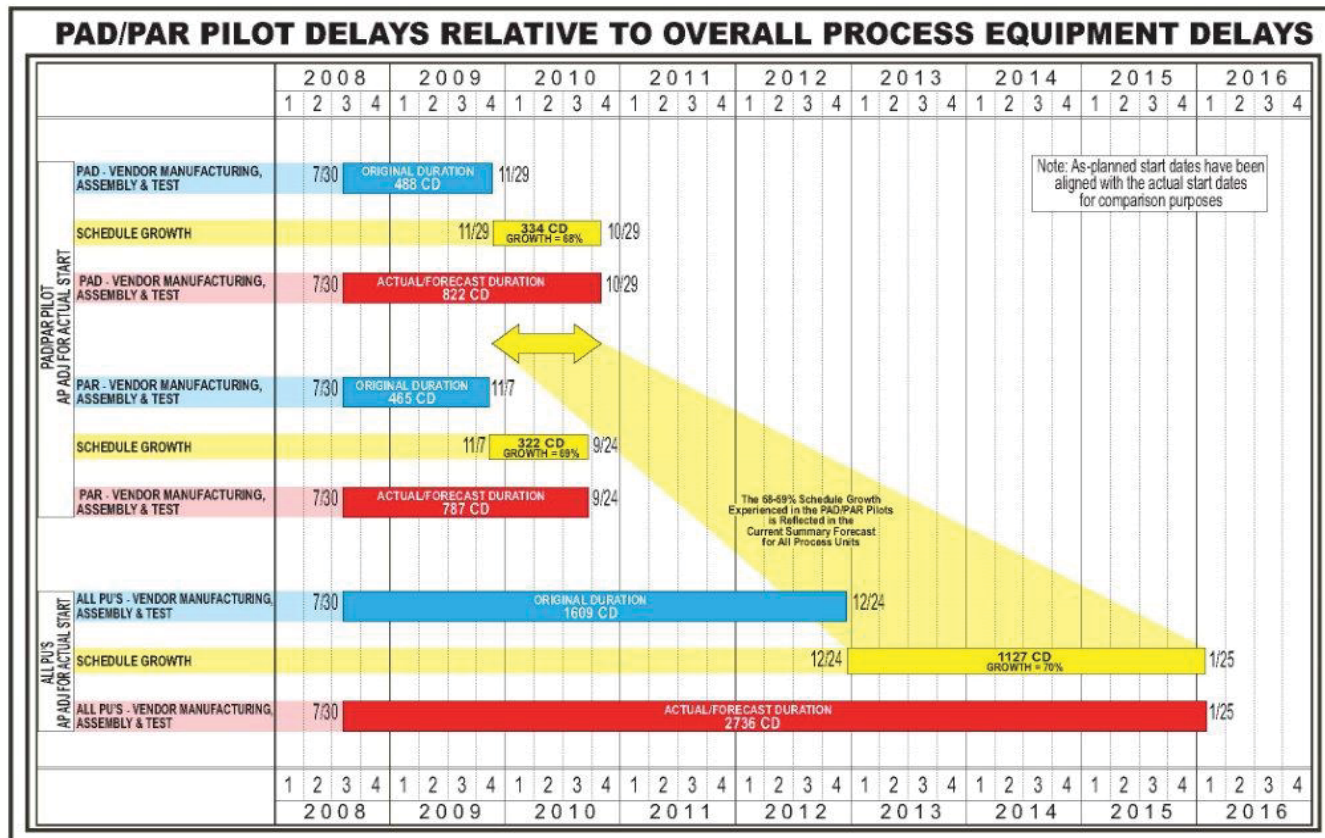
As described in above, the duration estimates on the PAD and PAR process units in the 2007 Baseline (made without the benefit of pilot procurements) fell far short of their actual durations. The 2007 Baseline estimated that to manufacture, test and ship the PAD unit would take 488 calendar days and the PAR unit would take 465 calendar days. In fact, the as-built durations to complete these processes took 822 and 787 calendar days, respectively. These extended durations constituted nearly a 70% schedule variance.

As with the discrete out-of-scope costs of the process units, the schedule-stretching delays caused by the challenges encountered during the manufacturing, assembly and testing of the process units were a product of DOE's refusal to allow MOX Services to conduct pilot procurements. Had MOX Services been allowed to pilot process units before submitting its Option 1 proposal, it would have known that the estimated process unit procurement cycle durations were unrealistically short. Thus, the resulting Hotel Load costs are "related to" the Russian parallelism requirement and so are explicitly beyond the scope of the Option 1 Contract.

Overall, the out-of-scope schedule growth experienced by the Project on all process units has been remarkably similar to that of the PAD and PAR units. Whereas the 2007 Baseline estimated the duration for all process units to be 1,609 calendar days, this estimate had increased as of the 2012 Rebaseline to 2,736 calendar days – a 70% variance. The following graphic, which adjusts the actual start dates for comparative purposes, illustrates this out-of-scope schedule expansion.

¹⁶² See Schedule 1.21.

Chart III.8, Pilot Procurement and Overall Process Unit Delays



- a. The Process Units Were on the MFFF Critical Path Throughout the Period of Claimed Hotel Load

The critical path of a project refers to the “longest chain of interrelated activities in the project schedule,” such that “any delay in completing an item on the critical path delays the entire project.” R. Nash, Jr., and S. Schooner, *The Government Contracts Reference Book*, p. 160 (3d ed. 2007). In terms of the Option 1 Contract, therefore, the critical path refers to scheduled activities that, if delayed, would cause a corresponding delay in delivering the MFFF through cold start-up testing.

From the early days of the U.S. MFFF Project, MOX Services advised DOE that certain process units were on the critical path. In September 2000, MOX Services informed DOE that delays in the delivery of certain equipment “will directly affect the construction schedule critical path.”¹⁶³ This document stated that based on the French reference plants’

¹⁶³ Letter DCS-DOE-000365 from Ed Brabazon, MFFF Engineering Manager, Duke Cogema Stone & Webster, to James V. Johnson, Technical Manager, DOE (Sept. 11, 2000) at 6 (“Exhibit 40”). In this document, “long lead procurements” were defined as “equipment procurements that, due to the time frame required to design, manufacture and test, the

experience, the procurement of the subject units should begin before construction started, which was then slated for March 21, 2003.¹⁶⁴ The PAD, PAR, and Jar Storage and Handling (“NTM”) process units were among the 60 or so units subject to this recommendation.¹⁶⁵ Later, in a July 2003 presentation to DOE, MOX Services noted that the “fabrication schedule of many units are on the critical path.”¹⁶⁶

Beginning in May 2008, the MFFF Monthly Status Reports’ critical path sections consistently highlighted one or more process units as controlling the end date of Option 1. Process units remained in the critical path reports until at least mid-2012 (at which point funding constraints imposed by NNSA started to make critical path analyses impossible). Specifically, the Monthly Status Reports from May 2008 through December 2008 demonstrate that at that time the critical path was controlled by the Homogenization and Pelletizing (“NPG”) process unit.¹⁶⁷ The reports showed the Sintering Furnace (“PFE”) unit to be critical from January 2009 through January 2010.¹⁶⁸ And from February 2010 through May 2012, the reports indicated that the PFE, NTM, NPG and Cladding and Decontamination (“GME”) units, among others, controlled the critical path.¹⁶⁹ Further, the May 2012 Monthly Status Report stated that only 43 of 334 gloveboxes had been received and that “a number of equipment deliveries continue behind contract dates affecting follow-on activities.”¹⁷⁰ This Report also stated that “MOX Services continues optimizing startup logic sequences for the equipment delays driving critical path.”¹⁷¹

In addition to the contemporaneous self-reports from MOX Services, a review of the historic scheduling data on the Project demonstrates that the process units were on the critical path for the entire period addressed here. The early Monthly Status Reports from April 2007 (the first report under the 2007 Baseline) to April 2008 stated that the MFFF concrete

equipment would impact the construction schedule if the procurement is not initiated in advance of the construction installation subcontract.” *Id.* at 4.

¹⁶⁴ *Id.* at 5.

¹⁶⁵ *Id.* at Attachment 1.

¹⁶⁶ DCS Recommendation, Exhibit 30, at 2.

¹⁶⁷ See May 2008 Monthly Status Report at 33 of 57 (“Exhibit 41”); Dec. 2008 Monthly Status Report at 31 of 56 (“Exhibit 42”).

¹⁶⁸ See January 2009 Monthly Status Report at 32 of 58 (“Exhibit 43”); January 2010 Monthly Status Report at 40 of 67 (“Exhibit 44”).

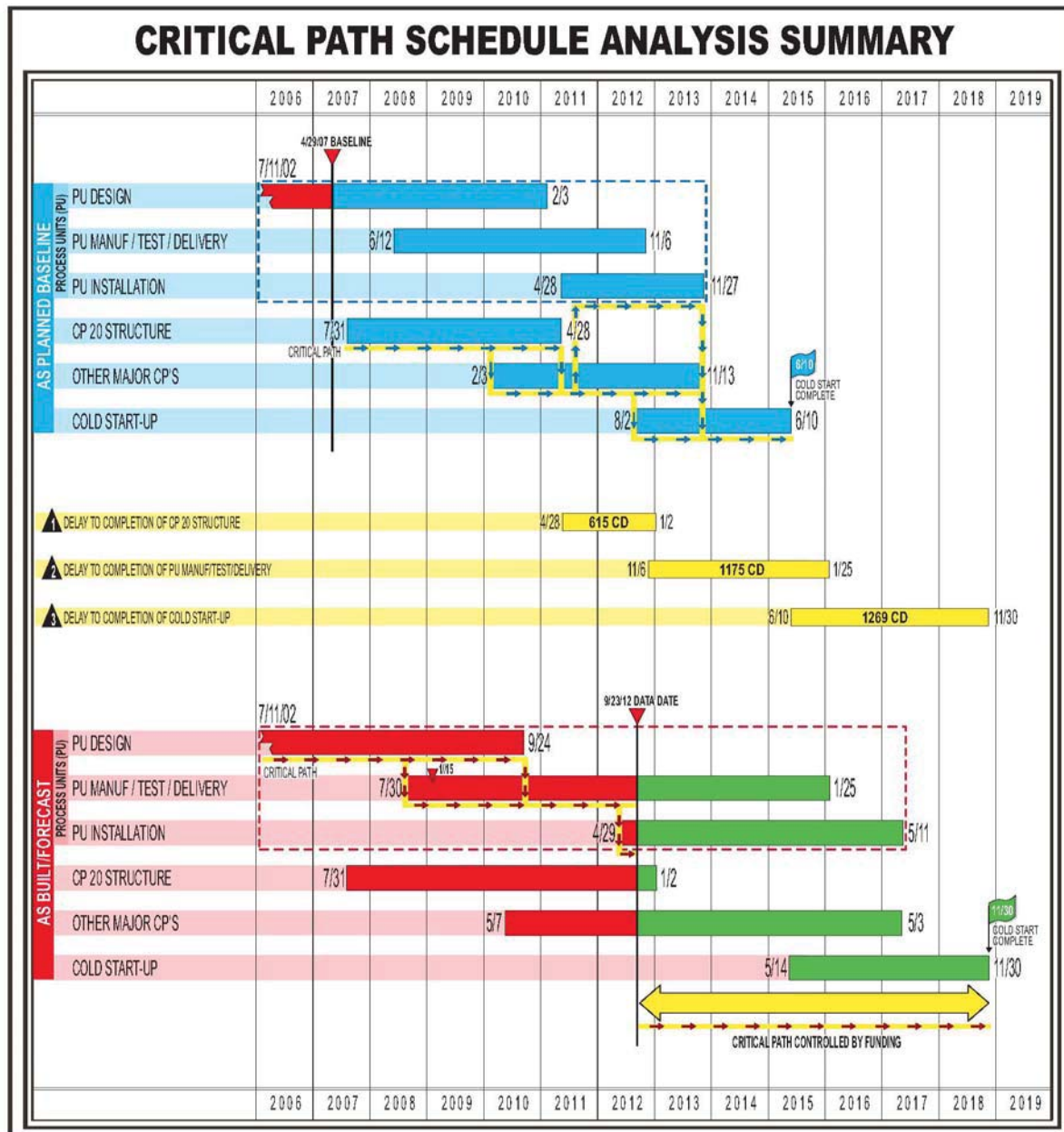
¹⁶⁹ See February 2010 Monthly Status Report at 38-39 of 69 (“Exhibit 45”); May 2012 Monthly Status Report at 50-51 of 66 (“Exhibit 46”).

¹⁷⁰ May 2012 Monthly Status Report, Exhibit 46, at 5 of 66.

¹⁷¹ *Id.*

structure controlled the critical path.¹⁷² In fact, as shown graphically below, the significantly longer delays experienced on the process unit procurements than those on the concrete structure meant that, from the start of the 2007 Baseline period, the process units actually controlled the critical path.

Chart III.9 Critical Path Schedule



¹⁷² See April 2007 Monthly Status Report at 27 of 43 (“Exhibit 47”); April 2008 Monthly Status Report at 33 of 56 (“Exhibit 48”).

The “Critical Path Schedule Analysis Summary” shows in blue that the 2007 Baseline predicted that the critical path would be controlled throughout Option 1 by the MFFF structure (the CP 20 concrete structure package, then “other major construction packages,” and finally, cold start-up). In fact, principally due to the significantly longer delays in process unit manufacturing (1,175 days) than the CP 20 structural package (615 days), the process units actually controlled the critical path from the 2007 Baseline until at least fall 2012. The as-built critical path, in red, shows the critical path controlled initially by the process unit design, and then concurrently by that design and the process unit manufacturing.

MOX Services started the construction of the concrete structure on August 6, 2007, only six days later than scheduled.¹⁷³ Yet, vendor manufacturing in the normal course (*i.e.*, not counting the piloted units) did not start until January 15, 2009, or 217 days later than its scheduled start in the 2007 Baseline.¹⁷⁴ Moreover, emphasizing the process units’ early appearance on the critical path, MOX Services experienced significant duration expansion on some process units in the earliest phase of the procurement cycle – design conformance.¹⁷⁵ The design conformance on the NTM glovebox unit was scheduled to take MOX Services 3,079 engineering hours to complete over a period of 260 days.¹⁷⁶ MOX Services actually incurred 18,675 engineering hours in performing design conformance on the NTM. *See* Appendix “NTM Engineering Hours.” The process started 65 days late and took 372 days longer than planned to complete, and it represented an overall delay of 437 days.¹⁷⁷

¹⁷³ PRIMAVERA A (data April 29, 2007) (shows “MILESTONE – Begin MOX Bldg Slab PKG 20” scheduled to begin on July 31, 2007) (“Exhibit 49”); PRIMAVERA B (data date January 29, 2012) (shows “Begin Construction – CP 20” to have occurred on August 6, 2007) (“Exhibit 50”).

¹⁷⁴ PRIMAVERA C (data date April 29, 2007) (shows “Process Unit Manufacturing - SDK” scheduled to begin on June 12, 2008) (“Exhibit 51”); PRIMAVERA D (data date September 23, 2012) (shows “NBX * GB1000 – Vendor Fab Glovebox” to have occurred on January 15, 2009) (“Exhibit 52”).

¹⁷⁵ “Design conformance” refers to the scope of work necessary to review and modify design documents to address changes to issued designs due to safety assessments, DOE technical reviews, and other causes. PCN 04-0074 at 1.13 (“Exhibit 53”).

¹⁷⁶ The Equipment Group Completion Plan appended to PCN 04-0074, Rev. 1 (July 12, 2005), (“Exhibit 54”). shows 3079 hours of planned NTM design conformance. *See* Basis of Estimate, MFFF Equipment Group Base Engineering, NTM-JAR Storage & Handling, Work Package 8319.01, .02 and .03, (October 2004) (“NTM Basis of Estimate (October 2004)”) (“Exhibit 55”) at 1. PRIMAVERA E (data date April 29, 2007) (shows “Complete Design Conformance for NTM” scheduled to begin on October 2, 2007, and finish on June 17, 2008 – a duration of 260 days) (“Exhibit 56”).

¹⁷⁷ PRIMAVERA F (data date January 29, 2012) (shows “Str Conform Design CO – NTM” to have begun on December 6, 2007, and to have ended on June 26, 2009) (“Exhibit 57”). The NTM is one of the more complicated process units, consisting of 33 interconnected

The combination of as-scheduled concrete construction and challenging, delayed process equipment procurement would continue and become more pronounced as the Project progressed. For example, MOX Services completed the first floor concrete slab on February 6, 2009 – only 2 calendar days later than estimated in the 2007 Baseline.¹⁷⁸ MOX Services started the 3rd floor slab on January 5, 2010 – only 168 calendar days behind schedule.¹⁷⁹ During this same period, process unit procurement was significantly delayed. The January 2010 Monthly Status Report included in the Summary Schedule section a forecast of December 18, 2013, for the completion of “Glovebox Fabrication, Assembly/Shipment.”¹⁸⁰ This forecast represents 531 days of delay when compared to the July 5, 2012 end date for this activity, as shown in the April 2007 Monthly Status Report, which reflects the 2007 Baseline.¹⁸¹

By the time of the 2012 Rebaseline, the construction of the concrete structure was scheduled to be complete on January 2, 2013.¹⁸² While this represented a 616 calendar day delay,¹⁸³ by this point the process unit procurements were delayed 1,175 calendar days and were not estimated for delivery until January 25, 2016.¹⁸⁴

gloveboxes enclosing dozens of equipment systems. *See* Exhibit 55, NTM Basis of Estimate (October 2004) at 1. But, the great delays experienced in design conformance on this unit highlights the difficulty of updating and modifying the French reference plant designs for use in the U.S. MFFF.

¹⁷⁸ PRIMAVERA G (data date April 29, 2007) (shows “COMPLETE Slab MOX SLAB-ON-GRADE” scheduled to finish on February 4, 2009) (“Exhibit 58”); PRIMAVERA H (data date September 23, 2012) (shows “COMPLETE BMP 1st FL SLAB” to have occurred on February 6, 2009) (“Exhibit 59”).

¹⁷⁹ PRIMAVERA I (data date April 29, 2007) (shows “Start Install BMP 3rd Floor” scheduled to begin on June 21, 2009) (“Exhibit 60”); PRIMAVERA J (data date January 29, 2012) (shows “START BMP 3rd FLOOR SLAB” to have occurred on January 5, 2010) (“Exhibit 61”).

¹⁸⁰ January 2010 Monthly Status Report, Exhibit 44 at 39 of 67.

¹⁸¹ *See* April 2007 Monthly Status Report, Exhibit 47 at 26 of 43.

¹⁸² PRIMAVERA K (data date September 23, 2012) (shows “COMPLETE CONSTRUCTION RELEASE -3 (Roof All Areas Complete)” scheduled to finish January 2, 2013) (“Exhibit 62”).

¹⁸³ PRIMAVERA L (data date April 29, 2007) (shows “COMPLETE MOX BLDG Roof” scheduled to finish on April 28, 2011) (“Exhibit 63”).

¹⁸⁴ PRIMAVERA M (data date April 29, 2007) (shows “Available at Site – KLI” scheduled for November 6, 2012) (“Exhibit 64”); PRIMAVERA N (data date September 23, 2012) (shows “KLO – Available for Site (MFFF)” scheduled for January 25, 2016) (“Exhibit 65”).

b. Hotel Load: Translating Schedule Scope Growth into Costs

MOX Services identifies time-related costs as Hotel Load,¹⁸⁵ and captures this data in its Project Management Control System (“PMCS”). The PMCS complies with the contract and all applicable FAR clauses.¹⁸⁶ In its Option 1 estimate, MOX Services specified positions that were needed to support various areas of the Project and calculated the number of hours that would be incurred on an annual basis.¹⁸⁷ For example, a Project Controls Manager was included in the estimate to manage and direct all of the functions within the purview of her organization. The estimate for this position was developed by calculating the number of hours that would be incurred over the course of the Project, from October 1, 2006 through CY 2013, which totaled 13,280 hours. These hours were combined with other positions within the Project Controls group. The total estimated hours for this group was 197,690.¹⁸⁸

Essentially, Hotel Load costs are incurred to maintain the Project’s ability to perform. While Hotel Load may include some activities that advance the Project by preparing for activities to be performed, Hotel Load generally does not involve activity that demonstrates visible progress toward a deliverable. For purposes of this Claim, the Hotel Load claim includes fee on general Hotel Load costs and excludes cost accounts specifically related to process units and construction, which have been claimed as discrete items.

On a project with the tremendous scope and complexity of the MFFF, Hotel Load costs can approach \$200 million per year. As shown in the following chart of MFFF Hotel Load, for example, actual Hotel Load costs have ramped up from \$65,717,532 per year in FY07 to \$141,488,442 per year in FY12. According to the 2012 Rebaseline, Hotel Load costs are estimated to average about \$160 million per year through FY18. The following

¹⁸⁵ The DOE defines Hotel Loads as a term used to “identify the cost associated with level of effort activities and fixed costs that will be incurred until a given piece of work is complete,” such as direct management and administration costs, and “indirect costs that are not part of direct production activities.” Department of Energy, Risk Management Guide (Jan. 12, 2011) (“Risk Management Guide”) at Attachment 15: Glossary 15-4 (“Exhibit 66”). MOX Services’ estimating approach for Hotel Load is consistent with the methodology described by the DOE in its Cost Estimating Guide. Department of Energy, Cost Estimating Guide, (May 9, 2011) (“Cost Estimating Guide”) at 21 (“Exhibit 67”).

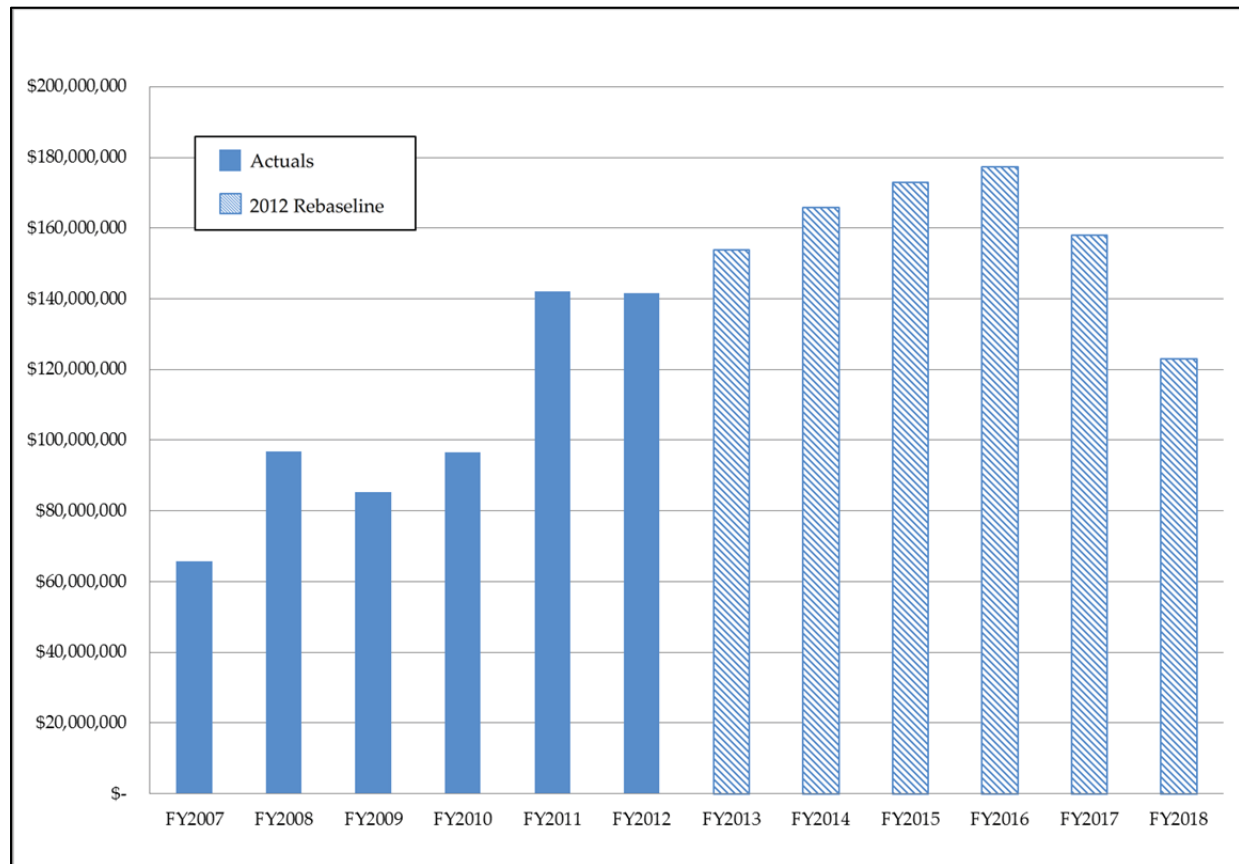
¹⁸⁶ As detailed in its CASB Disclosure Statement, MOX Services’ financial accounting operations are subject to DCAA review and conform to all GAAP and CASB requirements. *See* Duke Cogema Stone & Webster, Option 1 Proposal (March 15, 2006) (“Option 1 Proposal”) at 3-77, Exhibit 35.

¹⁸⁷ The DOE likewise acknowledges that level-of-effort activities increase Hotel Load costs. *See* Risk Management Guide, Exhibit 66, at 15-4, 15-5.

¹⁸⁸ Basis of Estimate for Management Area 06, Cost Account 6010 (Feb. 6, 2006) (“Exhibit 68”).

chart, compiled from data in the 2012 Rebaseline, shows MOX Services' estimated Hotel Load costs beyond the 2007 Baseline's estimated Project completion date in FY14.

Chart III.10 Hotel Load Over Time



MOX Services' estimated general Hotel Load costs grew \$813,632,265 – from \$799,014,425 to \$1,612,646,690 – between the 2007 Baseline and the 2012 Rebaseline with Addendum.¹⁸⁹ As of April 2013, MOX Services incurred \$356,231,679 in Hotel Load cost growth. The greatest share of this incurred cost growth was in Project Management (\$190,699,759), which includes costs for the overall Project management and administrative tasks to support the Option 1 Contract.¹⁹⁰ This cost growth also includes cost growth in Title III Engineering (\$87,442,774), Temporary Facilities & Services (\$67,989,242), Cold Startup (\$12,121,603), and ES&H Program Management (\$7,187,415). This cost growth does not include costs borne directly by or passed through to DOE, such as Management Area 90 costs for utilities and local support services at the Savannah River Site.¹⁹¹ Cost growth associated with MA 21 (Other Project Costs – Operations Preparation) in the amount of \$5.1

¹⁸⁹ See Schedule 1.21.

¹⁹⁰ Option 1 Proposal, Exhibit 35, at 1-2 (Cost Proposal).

¹⁹¹ Proposal 12-004, Exhibit 4, at WBS Definitions at 0901.

million has also been excluded from the claimed cost growth because it does not exceed the amount incorporated into the Contract in Mod. 162 for unexercised scope. NRC costs also are not being claimed. These adjustments result in cost growth of \$361,644,231 through April 2013, and MOX Services here claims entitlement to additional fee on this amount.

Chart III.11, Process Unit Hotel Load Cost Growth By Management Area¹⁹²

		[A]	[B]	[C] = B - A	[D]
		Incurred Through April 2013			
Management Area	Management Area Description	2007 Baseline	Actual Costs	Cost Growth	Claim Growth
06	Project Management	\$ 113,983,694	\$ 304,683,453	\$ 190,699,759	\$ 190,699,759
10	Title III Engineering	69,574,718	157,017,492	87,442,774	87,442,774
11	Regulatory Affairs	67,969,649	53,704,537	(14,265,112)	-
18	Temporary Facilities & Services	40,666,697	108,655,939	67,989,242	67,989,242
20	Cold Startup	2,622,004	14,743,607	12,121,603	12,121,603
21	(OPC) Operations Preparation	49,154,695	54,210,693	5,055,999	-
22	ES&H Program Management	6,725,391	13,912,806	7,187,415	7,187,415
Subtotal		\$ 350,696,848	\$ 706,928,527	\$ 356,231,679	\$ 365,440,792
Adjustments					
Adjustment: Less Non-DCS Costs					3,796,561
Total					\$ 361,644,231

The majority of this scope growth on which MOX Services appears in Project Management (MA 06), which, in terms of cost, increased \$190.7 million as of April 2013, which MOX Services here claims fee on this increase. This management area includes costs for the overall project management and administrative tasks to support the Option 1 contract. The scope growth in this area reflects the impact of schedule delay and, to a lesser degree, the change whereby MOX Services self-performed additional activities. The attached Schedule 3.42 summarizes the unplanned cost growth by cost account for each relevant Management Area.

¹⁹² See Schedule 1.215.

CB&I AREVA MOX Services, LLC.
Process Unit Scope Change Claim Summary

Schedule 3.0

	[A]	[B]	[C] = B - A	[D]
	<u>2007 Baseline</u>	<u>2012 Rebaseline with Addendum</u>	<u>Cost Growth</u>	<u>Claim Growth</u>
Process Units Claim Costs	\$ 1,150,921,514	\$ 2,518,113,724	\$ 1,367,192,210	\$ 1,324,966,109

Sources:

Schedule 3.02

CB&I AREVA MOX Services, LLC.
Process Unit Scope Change Claim By Category

Category Description	Cost Growth	Claim Growth
Process Unit Fabrication	\$ 355,446,370	\$ 345,578,075
Process Unit Assembly, Materials, and Supervision	101,144,856	100,569,601
Process Unit Title III Engineering	56,656,303	56,656,303
Subtotal	\$ 513,247,529	\$ 502,803,979
Quality Assurance - Process Units/Hotel Load	\$ 40,312,416	\$ 40,312,416
Total Process Unit Direct Cost Growth	\$ 553,559,945	\$ 543,116,396
Hotel Load	\$ 813,632,265	\$ 781,849,714
Process Units Total	\$ 1,367,192,210	\$ 1,324,966,109

Sources:

Schedule 3.02

Notes:

(1) In total, Claim Quality Assurance cost growth is \$145,856,514. Our analysis estimates that \$40,312,416 of this cost growth relates to Process Units and Hotel Load. (See Schedule 4.1 series)

CB&I AREVA MOX Services, LLC.
Process Unit Scope Change Claim - Cost Growth

	[A]	[B]	[C] = B - A	[D]	
Category Description	2007 Baseline	2012 Rebaseline with Addendum	Cost Growth	Claim Growth	Support Schedule
Process Unit Fabrication	\$ 234,510,584	\$ 589,956,954	\$ 355,446,370	\$ 345,578,075	Schedule 3.1
Process Unit Assembly, Materials, and Supervision	83,887,205	185,032,060	101,144,856	100,569,601	Schedule 3.2
Process Unit Title III Engineering	27,146,095	83,802,398	56,656,303	56,656,303	Schedule 3.3
Subtotal	\$ 345,543,884	\$ 858,791,412	\$ 513,247,529	\$ 502,803,979	
Quality Assurance Related to Process Units	\$ 4,049,445	\$ 29,703,639	\$ 25,654,194	\$ 25,654,194	Schedule 4.11
Quality Assurance Related to Hotel Load	2,313,760	16,971,983	14,658,222	\$ 14,658,222	Schedule 4.11
Subtotal - Quality Assurance	\$ 6,363,205	\$ 46,675,622	\$ 40,312,416	\$ 40,312,416	
Total Process Unit Direct Cost Growth	\$ 351,907,089	\$ 905,467,034	\$ 553,559,945	\$ 543,116,396	
Hotel Load	\$ 799,014,425	\$ 1,612,646,690	\$ 813,632,265	\$ 781,849,714	Schedule 3.4
Grand Total	\$ 1,150,921,514	\$ 2,518,113,724	\$ 1,367,192,210	\$ 1,324,966,109	

Schedule 3.1

CB&I AREVA MOX Services, LLC.
Process Unit Fabrication Summary

	[A]		[B]		[C] = B - A	
<u>Category Description</u>	<u>2007 Baseline</u>		<u>2012 Rebaseline with Addendum</u>		<u>Cost Growth</u>	<u>Support Schedule</u>
Process Unit Fabrication	\$	234,510,584	\$	589,956,954	\$ 355,446,370	Schedule 3.11
<u>Less: Adjustments</u>						
Process Unit Deferment & Associated Costs					\$ 9,846,767	Schedule 3.13
Non-DCS Costs					21,528	Schedule 3.12
Total Claim Growth					<u><u>\$ 345,578,075</u></u>	

CB&I AREVA MOX Services, LLC.
Process Unit Fabrication - By Cost Account

Schedule 3.11

Cost Account	Cost Account Description	[A]	[B]	[C] = B - A
		2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1701.8701	KCB - Homogenization - Sampling	1,934,236	6,458,691	4,524,455
1701.8702	KCC - PuO2 Decanning	1,924,402	4,993,127	3,068,725
1701.8703	KDA - PUO2 Decanning	3,627,549	19,430,268	15,802,719
1701.8704	KDM - Pre-Polishing Milling	9,462,891	32,784,460	23,321,569
1701.8705	KDR - Recanning	1,901,161	218,211	(1,682,950)
1701.8706	KPA GB 4010	1,004,520	2,531,529	1,527,009
1701.8751		-	-	-
1701.8777	KPG - Sampling Automatic	2,299,639	6,950,492	4,650,853
1701.8795		(2,786,631)	-	2,786,631
1702.8707	KCB 5000 Manufacturing	672,204	650,769	(21,435)
1702.8708		-	-	-
1702.8709		-	-	-
1702.8710		-	-	-
1702.8711		-	-	-
1702.8712	VDR - Filter Dismantling	1,768,495	61,433	(1,707,062)
1702.8713	VDU - Maintenance & Mechanical Dismantling	1,145,133	20,269	(1,124,864)
1702.8714		-	-	-
1703.8715	DCM - PuO2 3013 Storage	2,035,711	7,020,517	4,984,806
1703.8716	DCP - PuO2 Receiving	6,463,066	6,290,272	(172,794)
1703.8717	KDA - PUO2 Decanning (EQ - 6000 Density Measurement)	639,873	804,180	164,307
1703.8718		-	-	-
1703.8719		-	-	-
1704.8720	SDK - Rod Inspection and Sorting	2,941,521	2,373,011	(568,510)
1704.8721	SEK - Helium Leak Test	729,118	1,737,208	1,008,090
1705.8722	GMK - Rod Tray Loading	982,195	1,162,390	180,195
1705.8723	SCE - Rod Scanning	2,444,526	3,424,860	980,334
1705.8724	SMK - Rod Tray Handling	2,112,509	2,488,168	375,659
1705.8725	STK - Rod Storage	1,863,442	4,226,278	2,362,836
1705.8726	SXE - X Ray Inspection	2,095,947	2,365,417	269,470
1705.8727	TAS - Assembly Handling and Storage	1,113,247	9,358,223	8,244,976
1705.8728	TCK - Assembly Dry Cleaning	362,720	745,981	383,261
1705.8729	TCL - Assembly Final Inspection	2,008,889	1,275,021	(733,868)
1705.8730	TGJ - Reserve Pit	2,010,346	358,421	(1,651,925)

CB&I AREVA MOX Services, LLC.
Process Unit Fabrication - By Cost Account

Schedule 3.11

Cost Account	Cost Account Description	[A]	[B]	[C] = B - A
		2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1705.8731	TCP - Assembly Dismensional Inspection	1,608,930	2,087,795	478,865
1705.8732	TGM - Assembly Mockup Loading	3,651,566	2,896,012	(755,554)
1705.8733	TGV - Assembly Mounting	1,300,960	817,271	(483,689)
1706.8734	PSE - Green Pellet Storage	2,995,385	7,725,288	4,729,903
1706.8735	PSF - Sintering Pellet Storage	3,059,559	7,545,089	4,485,530
1706.8736	PSI - Scrap Pellet Storage	2,962,771	8,326,080	5,363,309
1706.8737	PSJ - Ground & Sorted Pellet Storage	3,013,168	8,700,651	5,687,483
1707.8738	Lab Equip - LRD/LPG/LBT/LAC/KLN/KLL/KLK/KLH	5,107,852	9,269,740	4,161,888
1707.8739	Lab Equip - LME/LAU/FLT	2,536,095	5,505,154	2,969,059
1707.8740	Lab Equip - LSR/LCP/KLJ	6,615,656	10,858,433	4,242,777
1707.8741	Lab Equip - LPS/LET/LER/LDS/KLM/KLF/KLB/KLC/KLD	6,827,803	13,008,455	6,180,652
1707.8742	Lab Equip - KLO/KLI/KLG/KLA/KLE	7,139,421	10,325,401	3,185,980
1707.8743	Lab Equip - LSG/LLI	419,067	641,331	222,264
1707.8744	Lab Equip - LFX	1,409,182	2,368,710	959,528
1708.8745	DCE - PUO2 Buffer Storage	2,172,985	11,862,545	9,689,560
1708.8746	GDE - Rod Decladding	1,043,388	3,778,042	2,734,654
1708.8747	GME - Rod Cladding and Decontamination	8,888,637	26,508,613	17,619,976
1708.8748	PAD - Preplanning	594,028	2,114,547	1,520,519
1708.8749	PAR - Preplanning	555,296	2,046,442	1,491,146
1708.8750	PML - Pellet Handling	6,826,152	26,530,210	19,704,058
1708.8751	PQE - Quality Control & Manual Sorting	3,300,657	7,432,755	4,132,098
1708.8752	PRE - Pellet Grinding	2,839,088	7,040,991	4,201,903
1708.8753	PRF - Pellet Grinding	2,839,088	6,926,812	4,087,724
1708.8754	PTE - Pellet Inspection & Sorting	1,222,670	5,806,075	4,583,405
1708.8755	PTF - Pellet Inspection & Sorting	1,216,910	5,693,786	4,476,876
1709.8756	DDP - UO2 Drum Emptying	1,261,619	2,858,233	1,596,614
1709.8757	LCT - Test Line (part of laboratory)	2,615,834	3,074,651	458,817
1709.8758	NBX - Primary Blend Ball Milling	1,399,068	3,817,183	2,418,115
1709.8759	NBY - Scrap Ball Milling	1,399,068	3,233,671	1,834,603
1709.8760	NCR - Scrap Processing	5,294,395	9,035,233	3,740,838
1709.8761	NDD - PUO2 Can Receiving and Emptying	1,578,425	3,803,765	2,225,340
1709.8762	NDP - Primary Dosing	4,193,563	12,177,516	7,983,953
1709.8763	NDS - Final Dosing	5,122,007	15,225,662	10,103,655

CB&I AREVA MOX Services, LLC.
Process Unit Fabrication - By Cost Account

Schedule 3.11

Cost Account	Cost Account Description	[A]	[B]	[C] = B - A
		2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1709.8764	NTM - Jar Storage and Handling	6,716,574	27,061,590	20,345,016
1709.8765	NXR - Powder Auxiliary	2,022,419	6,940,680	4,918,261
1710.8766	NPG - Homogenization & Pelletizing	3,917,028	14,407,626	10,490,598
1710.8767	NPH - Homogenization & Pelletizing	3,862,290	13,959,131	10,096,841
1710.8768	NPI - Homogenization & Pelletizing	3,873,576	2,312,137	(1,561,439)
1711.8769	KLA - Precipitation - Filtration - Oxidation	2,345,151	8,520,845	6,175,694
1711.8770	KCB GB1000 - Homogenization - Sampling	964,252	2,679,741	1,715,489
1711.8771	KDA - PUO2 Decanning	404,974	998,491	593,517
1711.8772	KDB - Dissolution	2,539,799	9,591,887	7,052,088
1711.8773	KDD - Dissolution of Chlorinated Feed	4,764,685	20,578,565	15,813,880
1711.8774	KDM - Pre-Polishing Milling (GB6400/7400)	786,781	1,380,592	593,811
1711.8775	KPA GB4000	1,928,637	3,378,746	1,450,109
1711.8776	KPB GB1000	681,155	1,777,821	1,096,666
1711.8777	KPG - Sampling Automatic	-	55,253	55,253
1711.8778	LLP - Pneumatic Transfer (33mm, PUO2 cans) Equipment	2,315,566	6,852,035	4,536,469
1711.8779	LTP - Pneumatic Transfer (76mm, PUO2 cans) Equipment	1,080,507	4,405,665	3,325,158
1711.8780	NTP - Pneumatic Transfer (133mm, PUO2 cans) Equipment	1,947,379	6,673,608	4,726,229
1712.8781	NPP - Additives Preparation	1,430,363	1,161,650	(268,713)
1712.8782	PFE/PFF - Sintering Furnace	24,950,333	71,472,962	46,522,629
1712.8783	TXE - Assembly Packaging	1,051,357	1,484,577	433,220
1712.8784	DRS - UO2 Receiving and Storage	152,633	-	(152,633)
1712.8786	PFF - Sintering Furnace	4	-	(4)
1713.8790	Process Unit Support	2,519,533	6,239,241	3,719,708
1713.8791	Assembly Suspense Accounts	-	-	-
1714.8708	KCD - Oxalic Mother Liquors Recovery Unit	857,872	742,665	(115,207)
1714.8709	KPA (GB2000, 2010, 3000, 8000, 8510) Purification Cycle	1,955,668	3,273,958	1,318,290
1714.8710	KPC - Nitric Acid Recovery Liquid Ring Pump GB	915,063	769,481	(145,582)
1714.8711	KWD - Aqueous Waste Reception	1,260,032	1,276,827	16,795
1714.8714	KPB (GB2000) Solvent Recovery Unit	406,920	564,199	157,279
1715.8716	DCP - PuO2 Receiving	-	157,000	157,000
1715.8718	VDQ Waste Storage	3,069,408	639	(3,068,769)
1715.8719	VDT Waste Nuclear Count - Drum Hdling & NDA P	889,899	4,468,007	3,578,108
1745.4500	MP Dismantling Units	-	-	-

CB&I AREVA MOX Services, LLC.
Process Unit Fabrication - By Cost Account

Schedule 3.11

Cost Account	Cost Account Description	[A]	[B]	[C] = B - A
		2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1745.4510	MP Receiving & Storage Units	-	-	-
1745.4520	MP Ball Milling & Pneumatic Transfers	-	-	-
1745.4530	MP Sintering Furnances	1,133,724	-	(1,133,724)
1745.4540	MP Powder & Pellets	-	-	-
1745.4550	MP Pellet Storage	-	-	-
1745.4570	MP Rodes & Assemblies	-	-	-
1745.4580	MP Assembly Packaging Crane	-	-	-
1745.4590	MP Laboratories	-	-	-
Total		\$ 234,510,584	\$ 589,956,954	\$ 355,446,370

Sources:

[A] and [B] Schedule 6.11

[C] Calculated

CB&I AREVA MOX Services, LLC.
Process Unit Fabrication - Non-DCS Cost Detail

				[A]	[B]	[C] = B - A
Cost Account	Cost Account Description	CE Code	CE Description	2007 Baseline	2012 Rebaseline	Cost Growth
1701.8704	KDM - Pre-Polishing Milling	ND	Non-DCS Cost	\$ -	\$ -	\$ -
1705.8725	STK - Rod Storage	ND	Non-DCS Cost	-	16,045	16,045
1707.8744	Lab Equip - LFX	ND	Non-DCS Cost	-	3,794	3,794
1711.8772	KDB - Dissolution	ND	Non-DCS Cost	-	845	845
1711.8773	KDD - Dissolution of Chlorinated Feed	ND	Non-DCS Cost	-	844	844
1713.8790	Process Unit Support	ND	Non-DCS Cost	-	-	-
Total				\$ -	\$ 21,528	\$ 21,528

Sources:

[A] May 2007 PRISM Data adjusted for budget transfers between July 2007 and September 2012

[B] 2012 contract proposal value as stated in December 2012 PRISM data and adjusted for 2012 Rebaseline Addendums

[C] Calculated

Schedule 3.13

CB&I AREVA MOX Services, LLC.
Deferment Costs Rev 2

					[A]	[B]	[C]	[D]	[E]= B + C + D	[F]= A*.05	[G]= A*.05	[H]= E + F + G	
					Actuals	Projected through FY 15			Restart in FY 16			Total Cost of De-Obligation	
#	Company	Subcontract	TOR	Unit	Deferred Amount	Demob/Slowdown Costs	Storage Costs to Date	FY 15 - Storage Costs	Total Deferment Costs through FY 15 End	FY 16 - Remob Costs	5%	FY 16 - Escalation 2%	Total Estimated Cost of Deferment FY 15 + FY 16 Costs
1	FNAG	10888-S-2528	000	PFE, PFF (10 GB)	\$ 10,009,639	\$ 4,049,957	-	\$ -	\$ 4,049,957	\$ -	(1) \$ -	(2) \$ -	\$ 4,049,957
2	PCC	10888-B-2774	003	LFT (2 GB)	739,081	97,000	-	-	97,000	36,954	14,782	14,782	148,736
3	SA Tech	10888-B-7617	001	Airlock Assemblies (5), Flanges (23)	120,274	25,333	9,762	2,405	37,500	6,014	2,405	2,405	45,919
4	SA Tech	10888-B-7617	003	KLO Electrolyzer Assembly	727,286	22,200	8,642	14,546	45,388	36,364	14,546	14,546	96,298
5	DMP	10888-B-4360	012	KLD, KLF, KLL, KLM, LAC, LBT, LPG (24 GB)	3,986,526	-	-	79,731	79,731	199,326	79,731	79,731	358,787
6	Camberra	10888-S-3477	000	Laboratory Analyzers (Spectrometers)	1,284,248	-	-	25,685	25,685	64,212	25,685	25,685	115,582
7	Petersen Inc.	10888-B-2766	021	DCM	4,477,639	-	-	89,553	89,553	223,882	89,553	89,553	402,988
8	Petersen Inc.	10888-B-2766	025	DCE	6,079,878	-	-	10,368	10,368	303,994	121,598	121,598	435,959
9	Diversified Metal Products	10888-S-4750	000	VDI	3,014,175	566	-	38,544	39,111	150,709	60,283	60,283	250,103
10	Wright	10888-B-3429	007	T&S Units	2,637,178	326,167	127,330	127,330	580,827	131,859	52,744	52,744	765,430
11	Diversified Metal Products	10888-B-4360	010	8 GB's deferred: KPA2000, 2010, 3000, KPC7000, KPB2000, KCD4000, KWD4000, 4010	965,176	33,000	5,200	43,400	5,200	200,000 (1)	-	(2)	243,400
12	Byers Precision Fabricators	10888-B-6661	003	Suspended/KLO: 02 DCR Pending DeletionLFX: 1 Suspended	696,328	-	39,000	18,000	57,000	34,816	13,927	13,927	105,743
13	IP Systems, Inc.	10888-B-7630	001	LME Suspended	389,056	47,892	47,938	21,790	117,620	19,453	7,781	7,781	144,854
14	IP Systems, Inc.	10888-B-7630	003	Suspended - KLC, KLI, KLN, LRD and LSR	1,607,726	31,664	47,938	21,790	101,392	32,155	213,933	213,933	213,933
15	Petersen Inc.	10888-B-2766	015	PRF	1,296,274	36,312	7,992	1,512	45,816	19,644 (1)	25,925	25,925	91,385
16	Petersen Inc.	10888-B-2766	017	Lab Frames	120,678	17,138	3,024	1,512	21,674	6,825 (1)	2,414	2,414	30,912
17	Petersen Inc.	10888-B-2766	019	TAS	2,361,317	149,503	-	-	149,503	22,572 (1)	47,226	47,226	219,301
18	Major Tool & Machine, Inc.	10888-B-2768	004	PTF	799,044	38,968	37,847	10,813	87,628	179,419	15,981	15,981	283,028
19	Oregon Iron Works	10888-B-6660	001	GB Total PML: (57 GB - Received: 17 Balance: 40)	1,361,743	171,760	119,170	59,585	350,515	1,000,000 (2)	27,235	27,235	1,377,749
20	Oregon Iron Works	10888-B-6660	003	KLH: 02, LET: 01, KLJ1: 03, KLJ2: 03, LDS: 03, LCP1: 02, LCP2: 02	1,811,663	75,645	32,501	16,250	124,397	90,583	36,233	36,233	251,213
21	Oregon Iron Works	10888-B-6660	005	Suspended and DCR 13-0543 Deletion of LPS2: 4 GBs: LPS*GB2200, LPS*GB2300, LPS*GB2400 and LPS*GB2500	2,176,612	30,625	16,250	16,250	63,126	108,831	43,532	43,532	215,489
					\$ 46,661,541	\$ 5,153,731	\$ 502,593	\$ 560,864	\$ 6,217,188	\$ 2,915,844	\$ 713,735	\$ 713,735	\$ 9,846,767

Sources:

See source file "Deferment Costs Rev 2.xlsx"

Notes:

(1) Numbers come from source file, not calculated based on 5% or 2% of deferred amount

Schedule 3.2

CB&I AREVA MOX Services, LLC.
Process Unit Assembly, Materials, and Supervision Summary

	[A]		[B]		[C] = B - A	
<u>Category Description</u>	<u>2007 Baseline</u>		<u>2012 Rebaseline with Addendum</u>		<u>Cost Growth</u>	<u>Support Schedule</u>
Process Unit Assembly, Materials, and Supervision	\$	83,887,205	\$	185,032,060	\$ 101,144,856	Schedule 3.21
<u>Less: Adjustments</u>						
Non-DCS Costs					575,255	Schedule 3.22
Total Claim Growth					<u><u>\$ 100,569,601</u></u>	

CB&I AREVA MOX Services, LLC.

Schedule 3.21

Process Unit Assembly, Materials, and Supervision - By Cost Account

Cost Account	Cost Account Description	[A]	[B]	[C] = B - A
		2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1716.8791	Assembly BOAs Accounts	\$ 10,629,229	\$ 50,274,011	\$ 39,644,782
1716.8795	Long Lead Procurements	16,050,885	49,105,674	33,054,789
1716.8796	ATG Spares Procurements	4,825,240	5,187,473	362,233
1717.8792	Self-Perform Suspense Accounts	318,024	726,190	408,166
1717.8793	Design Modifications	-	373,013	373,013
1717.8797	Unexpected Outsource Costs	-	192,886	192,886
1717.8798	Duty and Shipping Costs	-	2,461,227	2,461,227
1717.8799	REA Exposure	-	-	-
1717.87MA	Maintenance Program, Layup/In-Storage	-	340,078	340,078
Subtotal		\$ 31,823,378	\$ 108,660,553	\$ 76,837,175
1600.8601	Management / Admin	\$ 2,710,032	\$ 9,826,376	\$ 7,116,344
1600.8602	Project Controls	3,103,965	9,441,747	6,337,782
1600.8603	QA / QC	100,762	88,152	(12,610)
1601.8611	Business Travel	3,706,956	5,597,889	1,890,933
1602.8621	Supervision / Admin	2,114,941	4,493,560	2,378,619
1603.8631	Supervision / Admin	11,417,852	7,091,522	(4,326,329)
1603.8632	Job Living Expense	-	418,575	418,575
1603.8641	Management / Admin	(271,511)	-	271,511
1604.8641	Team Center Initiative	271,511	315,244	43,733
1605.8645	CA - NRC/CGIE - PUDC Support	-	5,663,563	5,663,563
1618.8748	PAD - Preplanning	-	-	-
1618.8749	PAR - Preplanning	-	-	-
1623.8785	Process Assembly Facilities	28,909,318	33,434,879	4,525,561
Subtotal		\$ 52,063,827	\$ 76,371,508	\$ 24,307,681
Total		\$ 83,887,205	\$ 185,032,060	\$ 101,144,856

CB&I AREVA MOX Services, LLC.

Schedule 3.21

Process Unit Assembly, Materials, and Supervision - By Cost Account

		[A]	[B]	[C] = B - A
<u>Cost Account</u>	<u>Cost Account Description</u>	<u>2007 Baseline</u>	<u>2012 Rebaseline with Addendum</u>	<u>Cost Growth</u>

Sources:

[A] and [B] Schedule 6.11

[C] Calculated

Schedule 3.22

CB&I AREVA MOX Services, LLC.
 Process Unit Assembly, Materials, and Supervision - Non-DCS Cost Detail

Cost Account	Cost Account Description	CE Code	CE Description	[A]	[B]	[C] = B - A
				2007 Baseline	2012 Rebaseline	Cost Growth
1623.8785	Process Assembly Facilities	ND	Non-DCS Cost	\$ -	\$ 575,255	\$ 575,255
Total				\$ -	\$ 575,255	\$ 575,255

Sources:

[A] May 2007 PRISM Data adjusted for budget transfers between July 2007 and September 2012

[B] 2012 contract proposal value as stated in December 2012 PRISM data and adjusted for 2012 Rebaseline Addendums

[C] Calculated

Schedule 3.3

CB&I AREVA MOX Services, LLC.
Process Unit Title III Engineering - By Cost Account

Cost Account	Cost Account Description	[A]	[B]	[C] = B - A
		2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1004.8043	PUDC Site Construction Support	\$ 7,825,052	\$ 38,089,073	\$ 30,264,021
1005.8056	PUDC Startup Support	6,351,227	19,280,579	12,929,352
1003.8033	PUDC Procurement & Fabrication Support	2,266,768	11,010,319	8,743,551
1004.8045	Software	10,703,048	15,422,427	4,719,379
Total		\$ 27,146,095	\$ 83,802,398	\$ 56,656,303 ⁽¹⁾

Sources:

[A] and [B] Schedule 6.11

[C] Calculated

Notes:

(1) Due to the fact that there are no Non-DCS costs the total cost growth is equal to the total claim growth.

Schedule 3.4

CB&I AREVA MOX Services, LLC.
Hotel Load Summary

	[A]	[B]	[C] = B - A	[D]	
Category Description	2007 Baseline	2012 Rebaseline with Addendum	Cost Growth	Claim Growth	Support Schedule
Hotel Load	\$ 799,014,425	\$ 1,612,646,690	\$ 813,632,265	\$ 785,646,275	Schedule 3.41
<u>Less: Adjustments</u>					
Non-DCS Costs				3,796,561	Schedule 3.43
Total Claim Growth				\$ 781,849,714	

Schedule 3.41

CB&I AREVA MOX Services, LLC.
Hotel Load by Management Area

		[A]	[B]	[C] = B - A	[D]
Management Area	Management Area Description	2007 Baseline	2012 Rebaseline with Addendum	Cost Growth	Claim Growth
06	Project Management	\$ 210,374,596	\$ 604,093,287	\$ 393,718,692	\$ 393,718,692
10	Title III Engineering	113,795,288	282,331,268	168,535,980	168,535,980
11	Regulatory Affairs	127,897,513	126,060,888	(1,836,625) ⁽¹⁾	-
18	Temporary Facilities & Services	67,767,805	198,269,948	130,502,143	130,502,143
20	Cold Startup	12,510,010	76,411,958	63,901,948	63,901,948
21	(OPC) Operations Preparation	240,996,730	270,819,345	29,822,615 ⁽²⁾	-
22	ES&H Program Management	25,672,483	54,659,996	28,987,513	28,987,513
Subtotal		\$ 799,014,425	\$ 1,612,646,690	\$ 813,632,265	\$ 785,646,275
Less: Non-DCS Costs					3,796,561
Total					\$ 781,849,714

Sources:

[A], [B], [D] Schedule 3.42

[C] Calculated

Schedule 3.43 for Non-DCS Costs

Notes:

(1) Management Area 11 - Regulatory Affairs cost growth is excluded from this Claim because a significant portion of these costs are borne directly by or passed through to the DOE.

(2) Management Area 21 - (OPC) Operations Preparation cost growth is excluded from this Claim because the cost growth does not exceed the amount of costs incorporated into the contract under Contract Modification 162 for unexercised scope.

CB&I AREVA MOX Services, LLC.

Schedule 3.42

Hotel Load Cost Growth - By Management Area and Cost Account

Cost Account	Cost Account Description	[A]	[B]	[C] = B - A
		2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
0601.6000	Project Office Operations	\$ 6,428,099	\$ 9,225,064	\$ 2,796,965
0601.6001	Communications	4,046,177	7,137,056	3,090,879
0601.6002	Special Projects	209,586	9,995,270	9,785,684
0601.6003	Employee Incentive Program	-	113	113
0601.6004	Project Off-Site Operations	2,145,784	11,006,133	8,860,349
0601.6005	Projects Oversight	6,630,465	16,667,313	10,036,848
0601.6009	Relocations	10,730,106	38,306,079	27,575,973
0602.6010	Project Controls	23,119,500	42,470,552	19,351,052
0602.6011	Risk Management	891,857	753,578	(138,279)
0603.6020	QA Program Management & Administration	1,451,615	1,437,299	(14,316)
0603.6021	Quality Engineering	2,718,261	2,861,506	143,245
0603.6022	Audit & Surveillance	1,379,395	1,363,028	(16,367)
0603.6023	Quality Control - Labor	2,177,354	2,400,403	223,049
0603.6024	QA / QC Assembly Group Support	775,405	536,953	(238,452)
0603.6025	MOX Potential Back Charges	-	222,526	222,526
0604.6030	PS&A Administrative Support	12,594,428	40,294,967	27,700,539
0604.6031	Human Resources	15,162,029	25,211,837	10,049,808
0604.6032	Training	8,271,079	20,542,206	12,271,127
0604.6033	Information and Personnel Security	8,404,946	18,575,630	10,170,684
0604.6034	Record Center	7,802,523	14,391,158	6,588,634
0604.6035	Internal Communication	(412,642)	134,969	547,611
0604.6036	Accounting, Treasury & Invoice Operations	12,049,569	24,577,396	12,527,827
0604.6037	Asset Management	359,916	359,715	(201)
0604.6038	Facility Management	3,635,905	22,202,181	18,566,276
0604.6039	Facility - Mini-MAC Building	-	123,501	123,501
0604.6042	PERC\$	-	818,632	818,632
0604.6045	Gateway Project	(20,000)	738,370	758,370
0604.6046	Shaw Nuclear Exchange	20,000	-	(20,000)
0604.6047	Legal Expenses	8,462,852	15,505,975	7,043,123
0604.6048	EMC Corporation Matter	1,555	1,557	2
0604.6049	952.204-77 Comp Security	873	699	(174)
0605.6040	Contract Management & Administration	16,584,091	18,569,434	1,985,343
0606.6050	Procurement	3,725,526	8,809,637	5,084,111

CB&I AREVA MOX Services, LLC.

Schedule 3.42

Hotel Load Cost Growth - By Management Area and Cost Account

Cost Account	Cost Account Description	[A]	[B]	[C] = B - A
		2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
0606.6051	Infrastructure Procurement	4,192,508	6,141,727	1,949,219
0606.6052	Construction Procurement	5,389,184	14,836,392	9,447,208
0606.6053	Process Equipment Procurement	8,811,049	16,683,838	7,872,789
0606.6054	Process Unit Procurement	433,523	464,936	31,413
0606.6055	Property Management	4,412,654	5,335,247	922,593
0606.6056	Employment Eligibility Verifications	2,400	851	(1,549)
0606.6057	Engineered Equipment Group	498,087	8,256,992	7,758,905
0606.6058	Procurement Corrective Action NRC Commercial Grade Dedication	-	-	-
0606.6059	Procurement Support Services	-	4,960,099	4,960,099
0606.6068	S&R and Warehouses	-	31,678,298	31,678,298
0606.6069	Materials Management	227,994	5,942,192	5,714,198
0607.6060	IT Support	9,194,965	47,929,477	38,734,512
0607.6061	IT Other Direct Costs (ODCs)	15,366,220	57,883,204	42,516,984
0607.6062	Team Center Initiative	1,999,755	2,116,187	116,432
0611.6000	Project Office Operations	-	833,463	833,463
0611.6001	Communications	-	1,164,936	1,164,936
0611.6002	Special Projects	-	1,270,591	1,270,591
0611.6004	Project Off-Site Operations	-	1,224,027	1,224,027
0611.6005	Projects Oversight	-	1,716,325	1,716,325
0611.6009	Relocations	-	1,138,970	1,138,970
0611.6090	Project Systems Assessment - NNSA (OPC)	500,002	239,770	(260,232)
0611.6091	EVMS Process Improvements Development ODC (OPC)	-	18,475	18,475
0612.6010	Project Controls	-	2,913,451	2,913,451
0614.6030	Program Support and Legal Administration	-	4,555,007	4,555,007
0614.6031	Human Resources	-	493,111	493,111
0614.6032	Training	-	3,519,268	3,519,268
0614.6034	Record Center	-	1,300,316	1,300,316
0614.6036	Accounting, Treasury & Invoice Operations	-	2,876,441	2,876,441
0614.6038	Facility Management	-	1,507,135	1,507,135
0614.6047	Legal Expenses	-	1,665,825	1,665,825
0615.6040	Contract Management & Administration	-	2,043,913	2,043,913
0616.6050	Procurement	-	721,704	721,704
0616.6051	Infrastructure Procurement	-	532,976	532,976

CB&I AREVA MOX Services, LLC.

Schedule 3.42

Hotel Load Cost Growth - By Management Area and Cost Account

Cost Account	Cost Account Description	[A]	[B]	[C] = B - A
		2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
0616.6052	Construction Procurement	-	1,654,810	1,654,810
0616.6053	Process Equipment Procurement	-	290,251	290,251
0616.6055	Property Management	-	1,305,869	1,305,869
0616.6057	Engineered Equipment Group	-	569,012	569,012
0616.6059	Procurement Support Services	-	412,851	412,851
0616.6068	S&R and Warehouses	-	1,319,145	1,319,145
0616.6069	Materials Management	-	510,097	510,097
0617.6060	IT Support	-	6,586,251	6,586,251
0617.6061	IT Other Direct Costs (ODCs)	-	4,239,122	4,239,122
MA 06 Subtotal		\$ 210,374,596	\$ 604,093,287	\$ 393,718,692
1000.8001	Management / Admin	\$ 8,574,626	\$ 20,831,188	\$ 12,256,562
1000.8002	Engineering Services Project Controls	3,588,904	9,548,015	5,959,111
1000.8003	Engineering Assurance	2,053,124	8,647,662	6,594,538
1000.8004	Technical Coordination	3,098,008	6,527,963	3,429,955
1000.8005	Document Management	819,754	3,991,953	3,172,199
1000.8006	Engineering Training	3,524,187	10,658,836	7,134,649
1001.8011	Business Travel	4,166,588	3,999,996	(166,592)
1001.8012	Temporary Assignments	125,319	10,500,723	10,375,404
1001.8019	Other ODCs	8,701,700	7,620,090	(1,081,610)
1002.8021	Supervision / Admin	1,359,305	1,349,621	(9,684)
1002.8022	Chemical	342,612	475,791	133,179
1002.8023	Mechanical	173,705	13,083	(160,622)
1002.8024	Laboratory	104,196	60,629	(43,567)
1002.8025	Balance of Plant (BOP)	21,323	37,924	16,601
1002.8026	Safety	158,936	73,015	(85,921)
1002.8027	Reference Plant Support	26,905	105,977	79,072
1003.8031	Supervision / Admin	5,030,543	4,537,192	(493,351)
1003.8032	Civil / Structural	2,691,947	40,575,130	37,883,183
1003.8034	Electrical / I&C Site Construction Support	4,801,717	29,183,333	24,381,617
1003.8035	Chemical-Construction Support	3,116,751	18,628,193	15,511,442
1003.8036	Mechanical – Construction Support	2,862,224	8,527,568	5,665,344
1003.8037	Plant Configuration Site Construction Support	5,465,749	9,041,717	3,575,968

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Schedule 3.42

Hotel Load Cost Growth - By Management Area and Cost Account

Cost Account	Cost Account Description	[A]	[B]	[C] = B - A
		2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1003.8038	Engineering Mechanics - Site Construction Support	1,588,640	20,330,086	18,741,446
1003.8042	Civil / Structural	-	-	-
1004.8041	Supervision / Admin	1,729,643	1,905,609	175,966
1004.8042	Civil / Structural	1,876,517	1,474,971	(401,547)
1004.8044	Electrical / I&C Procurement and Fabrication Support	1,194,353	2,595,894	1,401,541
1004.8046	Chemical-Procurement/Fabrication Support	6,775,218	19,644,386	12,869,168
1004.8047	Mechanical – Procurement/Fabrication Support	664,828	1,304,971	640,143
1004.8048	Plant Configuration - Construction, Procurement & Fabrication Support	2,982,901	5,747,615	2,764,714
1004.8049	Equipment Qualification	4,957,698	9,389,180	4,431,482
1005.8051	Supervision / Admin	1,046,687	649,247	(397,440)
1005.8052	Mechanical – Startup & Operations Support	4,210,942	189,407	(4,021,535)
1005.8053	Electrical / IC Startup and Operations Support	6,866,646	3,112,993	(3,753,653)
1005.8054	Civil/ Structural Startup Support	644,131	-	(644,131)
1005.8055	Engineering Mechanics Startup Support	786,719	-	(786,719)
1005.8057	Chemical/Mechanical Engineering Startup Support	2,039,416	548,121	(1,491,295)
1005.8058	Software Modifications	11,589,148	9,113	(11,580,035)
1005.8059	Plant Configuration	4,033,678	-	(4,033,678)
1006.8001	Management / Admin ODC	-	1,407,038	1,407,038
1006.8002	Project Controls OPC	-	262,767	262,767
1006.8003	Engineering Assurance ODC	-	446,932	446,932
1006.8005	Document Management	-	169,402	169,402
1006.8006	Engineering Training	-	131,226	131,226
1006.8011	Business Travel	-	5,563	5,563
1006.8049	Engineering Mechanics	-	925,155	925,155
1006.8052	Process Unit Responsible Engineer Startup Support	-	3,949,689	3,949,689
1006.8053	Electrical / IC Startup Support	-	3,540,890	3,540,890
1006.8054	Civil/ Structural Startup Support	-	1,226,667	1,226,667
1006.8055	Engineering Mechanics Startup Support	-	1,721,000	1,721,000
1006.8057	Chemical/ Mechanical Engineering Startup Support	-	5,571,346	5,571,346
1006.8059	Plant Configuration	-	1,136,403	1,136,403
MA 10 Subtotal		\$ 113,795,288	\$ 282,331,268	\$ 168,535,980
1100.8101	Management / Administration	\$ 1,496,757	\$ 2,227,893	\$ 731,136

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Schedule 3.42

Hotel Load Cost Growth - By Management Area and Cost Account

Cost Account	Cost Account Description	[A]	[B]	[C] = B - A
		2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1100.8102	NSA Project Controls	1,026,391	1,491,371	464,980
1101.8111	Business Travel	947,994	504,806	(443,188)
1101.8112	Temporary Assignments	178,491	55,790	(122,701)
1101.8119	Other ODCs (Legal & S/C Costs)	1,470,334	1,622,276	151,942
1102.8121	Defense of Licensing Basis	7,263,816	11,460,643	4,196,827
1102.8122	Compliance Program	3,412,700	2,054,829	(1,357,871)
1102.8123	Condition Reports Work Resolution	-	205,042	205,042
1103.8132	Chemical Safety Support	971,851	4,012,744	3,040,893
1103.8133	Laboratory Support	332,617	210,173	(122,444)
1104.8141	ES&H Program	219,560	1,229,596	1,010,036
1104.8142	Radiological Protection	13,298	5,869	(7,429)
1104.8143	Environmental Protection Program	713,022	823,040	110,018
1104.8144	Industrial Safety Program	380,343	638,299	257,956
1104.8145	Waste Management Program	(50,533)	334,145	384,678
1104.8146	Fitness for Duty Program	(216,463)	515,082	731,545
1104.8147	Emergency Response Program	80,657	94,698	14,041
1104.8148	Employee Safety Incentive Program	81,139	79,977	(1,162)
1104.8149	Construction - Safety Engineering Support	233,618	459,000	225,382
1105.8151	Criticality Safety Procurement & Const Support	81,672	4,035,676	3,954,004
1105.8154	Nuclear Radiation Protections	73,973	2,291,377	2,217,404
1105.8155	Nuclear Radiation & Criticality Monitoring	-	1,793	1,793
1106.8161	Defense of the Safety Basis	1,367,960	4,087,071	2,719,111
1109.8191	NRC Costs	18,764,920	57,777,922	39,013,002
1109.8192	Physical Security Program	75,562,597	12,193,107	(63,369,490)
1109.8193	Material Control & Accountability Program	13,490,799	13,452,777	(38,022)
1110.8101	Management / Administration	-	226,869	226,869
1110.8102	Project Controls	-	102,632	102,632
1112.8121	Defense of Licensing Basis	-	1,524,420	1,524,420
1113.8132	Chemical Safety Support	-	567,575	567,575
1115.8151	Criticality Safety Procurement & Const Support	-	951,357	951,357
1115.8154	Nuclear Radiation Protections	-	329,182	329,182
1116.8161	Defense of the Safety Basis	-	493,859	493,859
MA 11 Subtotal		\$ 127,897,513	\$ 126,060,888	\$ (1,836,625)

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Schedule 3.42

Hotel Load Cost Growth - By Management Area and Cost Account

Cost Account	Cost Account Description	[A]	[B]	[C] = B - A
		2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1802.8820	Supplies & Services	\$ 354,576	\$ 2,167,694	\$ 1,813,118
1802.8821	Office Equipment, Furniture Leases & Purchases	2,924,041	4,278,754	1,354,713
1803.8830	Temporary Site Features & Services	128,086	518,980	390,894
1803.8832	Buildings Shops / Trailers	15,839,261	22,521,397	6,682,136
1803.8833	Utilities & Services	14,684,284	45,585,905	30,901,621
1803.8850	Misc Field Construction Supplies	-	-	-
1804.8840	Equipment	12,689,446	43,706,780	31,017,334
1804.8842	Construction Materials Management	209,481	5,794,327	5,584,846
1804.8843	Tools	223,651	754,407	530,756
1804.8850	Temporary Site Features & Services	-	-	-
1805.8850	Miscellaneous Field Supplies & Services	17,474,277	72,941,704	55,467,427
1805.8851	Foreign National Escorts	3,240,702	-	(3,240,702)
MA 18 Subtotal		\$ 67,767,805	\$ 198,269,948	\$ 130,502,143
2000.9001	Management / Administration	\$ 7,999,319	\$ 12,719,516	\$ 4,720,197
2000.9002	Project Controls	1,319,146	1,844,714	525,568
2001.9014	Test Equipment & Consumables	1,762,350	1,910,308	147,958
2002.9021	Generic Test Documents	80,437	143,702	63,265
2002.9024	Technical Support	-	139,892	139,892
2002.9026	Cold Startup Training	1,348,758	1,211,069	(137,689)
2004.9047	Turnover & Logistics	-	2,852,716	2,852,716
2006.9060	Maintenance Program, Layup/In-Storage	-	4,473,849	4,473,849
2010.9101	Management / Administration - IPT	-	31,409,273	31,409,273
2010.9102	Project Controls - IPT	-	4,389,193	4,389,193
2010.9103	Program Support for Start-up	-	3,425,955	3,425,955
2011.9117	Spare Parts - IPT	-	3,630,728	3,630,728
2012.9124	Technical Support - IPT	-	2,130,381	2,130,381
2012.9126	Cold Startup Training - IPT	-	6,130,662	6,130,662
MA 20 Subtotal		\$ 12,510,010	\$ 76,411,958	\$ 63,901,948
2100.9501	Management / Administration	\$ 22,539,333	\$ 22,482,010	\$ (57,323)
2100.9502	Project Controls	3,957,266	4,341,736	384,470

CB&I AREVA MOX Services, LLC.

Schedule 3.42

Hotel Load Cost Growth - By Management Area and Cost Account

Cost Account	Cost Account Description	[A]	[B]	[C] = B - A
		2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
2100.9503	Quality Assurance	-	-	-
2100.9504	Environment, Safety & Health	-	-	-
2100.9506	PS&A	(0)	-	0
2101.9511	Business Travel	2,134,842	2,028,587	(106,255)
2101.9512	Temporary Assignments	3,183,717	6,462,252	3,278,535
2101.9515	Consumables	-	2,438,200	2,438,200
2101.9518	Software	4,114,132	3,954,314	(159,818)
2102.9522	Training at Richland	2,863,086	1,182,981	(1,680,105)
2102.9523	Training at LaHague	48,189,683	3,675,088	(44,514,595)
2102.9524	Training at Melox	64,791,905	5,648,433	(59,143,472)
2102.9525	Other Training	66,704,236	85,723	(66,618,513)
2102.9526	Operations Activities	(1,222,760)	157,198	1,379,958
2102.9527	Operations Process Simulator	8,646,253	1,584,317	(7,061,936)
2102.9528	Reference Plant Training Direct Costs	(8,646,253)	108,059,327	116,705,580
2103.9531	Organizational Documents	1,141,455	4,215,983	3,074,528
2103.9532	Laboratory Procedures	4,252,295	2,677,948	(1,574,347)
2103.9533	Maintenance Procedures	4,612,425	4,593,634	(18,791)
2103.9534	Operating Procedures	10,763,793	8,148,158	(2,615,635)
2103.9535	Hot Startup Planning	373,242	1,121,733	748,491
2103.9536	Turnover to Operations	454,344	-	(454,344)
2103.9537	Support to Other groups	920,976	7,136,528	6,215,552
2104.9541	Early Option 2 Proposal Development (Labor)	-	672,700	672,700
2105.9550	Aqueous Polishing Activities	259,640	3,216,088	2,956,448
2105.9551	Powder Pellet Activities	173,085	6,619,357	6,446,272
2105.9552	Rod Bundle Activities	129,730	2,473,008	2,343,278
2105.9553	Balance of Plant Activities	167,995	6,595,420	6,427,425
2105.9554	Laboratory Activities	-	14,901,345	14,901,345
2105.9555	Maintenance Activities	320,048	31,130,877	30,810,829
2105.9556	Logistics / Warehousing	-	2,675,586	2,675,586
2105.9557	System Engineering Activities	172,262	12,540,813	12,368,551
MA 21 Subtotal		\$ 240,996,730	\$ 270,819,345	\$ 29,822,615
2201.8138	Relocation	\$ -	\$ 20,912	\$ 20,912

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Schedule 3.42

Hotel Load Cost Growth - By Management Area and Cost Account

Cost Account	Cost Account Description	[A]	[B]	[C] = B - A
		2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
2201.8141	ES&H Program	1,473,688	8,149,431	6,675,743
2201.8143	Environmental Protection Program	1,134,848	5,433,744	4,298,896
2201.8144	Industrial Safety Program	995,294	930,909	(64,385)
2201.8145	Waste Management Program	924,451	3,318,918	2,394,467
2201.8146	Fitness for Duty Program	1,836,793	1,379,366	(457,427)
2201.8147	Emergency Preparedness Program	1,565,817	1,640,343	74,526
2201.8148	Employee Safety Incentive Program	519,249	1,053,890	534,641
2201.8149	ES & H Safety Engineer	1,783,459	11,290,726	9,507,267
2201.8150	Field Office Supplies	-	5,499	5,499
2201.8820	Field Office Supplies	171,293	90,217	(81,076)
2202.8141	ES&H Program	-	1,232,710	1,232,710
2202.8143	Environmental Protection Program	-	949,660	949,660
2202.8145	Waste Management Program	-	693,898	693,898
2202.8147	Emergency Response Program	-	599,081	599,081
2202.8148	Employee Safety Incentive Program	-	177,741	177,741
2202.8149	ES & H Safety Engineer	-	2,101,834	2,101,834
2202.9504	Radiological Protection Early Start Up	15,267,591	15,591,116	323,525
MA 22 Subtotal		\$ 25,672,483	\$ 54,659,996	\$ 28,987,513
Total		\$ 799,014,425	\$ 1,612,646,690	\$ 813,632,265

Sources:

[A] and [B] Schedule 6.11

[C] Calculated

CB&I AREVA MOX Services, LLC.
Hotel Load - Non-DCS Cost Detail

Cost Account	Cost Account Description	CE Code	CE Description	[A]	[B]	[C] = B - A	[D]
				2007 Baseline	2012 Rebaseline ⁽¹⁾	Cost Growth	Amount For Non-DCS Adjustment
0601.6001	Communications	ND	Non-DCS Cost	\$ 106,923	\$ 77,479	\$ (29,444)	\$ (29,444)
0602.6010	Project Controls	ND	Non-DCS Cost	-	13,793	13,793	13,793
0604.6038	Facility Management	ND	Non-DCS Cost	-	1,741,230	1,741,230	1,741,230
0607.6060	IT Support	ND	Non-DCS Cost	-	8,774	8,774	8,774
0607.6061	IT Other Direct Costs (ODCs)	ND	Non-DCS Cost	-	24,031	24,031	24,031
1002.8021	Supervision / Admin	ND	Non-DCS Cost	-	826	826	826
1003.8032	Civil / Structural	ND	Non-DCS Cost	-	80,702	80,702	80,702
1802.8820	Supplies & Services	ND	Non-DCS Cost	-	8,945	8,945	8,945
1802.8821	Office Equipment, Furniture Leases & Purchases	ND	Non-DCS Cost	878,862	1,248,289	369,427	369,427
1803.8832	Buildings Shops / Trailers	ND	Non-DCS Cost	416,368	885,285	468,917	468,917
1803.8833	Utilities & Services	ND	Non-DCS Cost	2,522,587	3,067,642	545,055	545,055
1804.8840	Equipment	ND	Non-DCS Cost	284,036	525,052	241,016	241,016
1804.8842	Construction Materials Management	ND	Non-DCS Cost	-	-	-	-
1804.8843	Tools	ND	Non-DCS Cost	-	-	-	-
1805.8850	Miscellaneous Field Supplies & Services	ND	Non-DCS Cost	298,460	586,712	288,252	288,252
2201.8144	Industrial Safety Program	ND	Non-DCS Cost	-	-	-	-
2201.8145	Waste Management Program	ND	Non-DCS Cost	-	9,075	9,075	9,075
2201.8146	Fitness for Duty Program	ND	Non-DCS Cost	-	6,211	6,211	6,211
2201.8148	Employee Safety Incentive Program	ND	Non-DCS Cost	-	6,346	6,346	6,346
2201.8149	ES & H Safety Engineer	ND	Non-DCS Cost	-	-	-	-
2202.9504	Radiological Protection Early Start Up	ND	Non-DCS Cost	-	13,405	13,405	13,405
1109.8193	Material Control & Accountability Program	ND	Non-DCS Cost	-	14,865	14,865	MA Not Claimed
2103.9532	Laboratory Procedures	ND	Non-DCS Cost	-	7,321	7,321	MA Not Claimed
2103.9537	Support to Other groups	ND	Non-DCS Cost	-	-	-	MA Not Claimed
Total				\$ 4,507,236	\$ 8,325,983	\$ 3,818,747	\$ 3,796,561

Sources:

[A] May 2007 PRISM Data adjusted for budget transfers between July 2007 and September 2012

[B] 2012 contract proposal value as stated in December 2012 PRISM data and adjusted for 2012 Rebaseline Addendums

[C] Calculated

[D] Equals column C except for cost accounts in Management Areas excluded from REA

Note:

(1) The 2012 Rebaseline Addendum trends did not include any Non-DCS Costs.

IV. CHANGE IN THE METHOD OF CONSTRUCTION PERFORMANCE

In awarding the Option 1 Contract, NNSA directed MOX Services to serve as a construction manager. In this role, NNSA prohibited MOX Services from self-performing construction; rather, NNSA's performance strategy called for MOX Services to hire fixed-price subcontractors to perform all Project construction. MOX Services based its cost estimates on NNSA's construction performance strategy. Further, MOX Services excluded the risk that NNSA's strategy might fail from its cost estimates and, therefore, from the scope of the Contract.

Ultimately, NNSA abandoned this performance strategy because not enough qualified subcontractors were willing and able to perform fixed-price construction work on this immensely complex, first-of-a-kind facility that was governed by the exacting nuclear standards called for in the Contract. As MOX Services' original cost estimates had been explicitly based on the assumption that qualified fixed-price subcontractors would be used, the abandonment of this strategy increased the scope and the cost of work of the Project. Through Modification 152, NNSA acknowledged the abandonment of the original construction performance strategy in two important ways.

First, Modification 152 removed the prohibition on MOX Services' self-performance of construction scope from the Contract, reflecting the longstanding failure of NNSA's original strategy and the Agency's abandonment of it. No longer limited to the construction manager role, MOX Services would self-perform construction where doing so would be most cost-effective. But the change from NNSA's original strategy increased the Project costs because now MOX Services would be required directly to coordinate, schedule and supervise enormous amounts of craft labor instead of merely managing the fixed-priced subcontracts of capable vendors.

Second, Modification 152 removed NNSA's requirement that construction contacts be let exclusively on a fixed-price basis whenever practicable. The use of time and materials ("T&M") subcontracts, too, increased the amount and complexity of MOX Services' work. To ensure that the applicable NQA-1 quality standards were met, MOX Services deployed significant Quality Assurance/Quality Control resources to assist its subcontractors.

The government is responsible for increased costs over the 2007 Baseline in the areas of Quality Assurance and Construction Management resulting from NNSA's failed construction performance strategy and subsequent change. Because MOX Services' negotiated fee under the Contract did not contemplate this extra work, the government is also responsible to MOX Services for fee on those increased costs.

MOX Services has computed the impact of the changes in these two areas based on the difference between the 2007 Baseline and the 2012 Rebaseline with Addendum. The incurred increased costs associated with the change in performance strategy was estimated to be \$109,468,108 as of April 2013. After making certain bottom line adjustments, MOX Services claims 10% fixed fee on this amount.

A. Contract Requirements

Throughout Option 1 NNSA has controlled and directed the construction performance strategy to be used by MOX Services. As initially awarded, the Contract limited MOX Services' role to that of a construction manager, prohibited MOX Services from performing any construction work with its own workforce, and required competitively bid fixed-price subcontracting to the maximum extent possible. MOX Services, in turn, based its estimated cost on this method of performance and the assumption that, in accordance with NNSA's strategy, adequate competition from qualified subcontractors would exist to drive down costs.

1. NNSA Required MOX Services To Perform Exclusively As Construction Manager And Prohibited MOX Services From Self-Performing Construction

At definitization, the Contract expressly barred MOX Services from self-performing construction work.¹⁹³ Specifically, clause H.7, "Construction Prohibition," stated that "[n]o construction work shall be awarded to the firm that designs the MOX Fuel Fabrication Facility or its subsidiaries or affiliates."¹⁹⁴ The Construction Prohibition was so emphatic that it could only be changed "with the approval of the Secretary."¹⁹⁵

For purposes of this clause, the term "construction" was broadly defined to include any activity required to erect and build the permanent plant, warehouse, and administrative facilities necessary to make the building habitable, as well as the systems and utilities needed for the processing systems to function appropriately.¹⁹⁶

The Construction Prohibition did not extend to construction management.¹⁹⁷ Instead, in accordance with the SOW, MOX Services would "perform construction management services and ensure the successful completion of functional check-out, and cold start-up of

¹⁹³ See Exhibit 2, Mod 124, at J.1.40; see also Letter DOE-DCS-001025 from James R. Bieschke, Contracting Officer, DOE, to Larry R. Barnes, President, Duke, COGEMA, Stone and Webster, LLC (July 20, 2005) ("Exhibit 69") at 2 ("Exercise of Unexercised Segments (Remainder) of Option 1").

¹⁹⁴ Exhibit 2, Mod 124, at H.7.

¹⁹⁵ *Id.*

¹⁹⁶ *Id.*

¹⁹⁷ *Id.* Clause H.7 expressly excluded construction management from the definition of "construction." It stated, "This construction definition does not apply to construction management. Construction Management activities are not prohibited and may be performed by the prime contractor."

the facility.”¹⁹⁸ Thus, under NNSA’s strategy MOX Services’ principal undertaking would consist of construction management activities.

2. NNSA Required MOX Services To Utilize Fixed-Price Construction Subcontractors To Achieve Cost Efficiency

In addition to prohibiting MOX Services from self-performing any construction activities on the Project, the SOW required MOX Services to compete the construction subcontracts on a fixed-price basis:

The Contractor shall not perform any construction with its own forces. All construction activities shall be procured on a competitive fixed-price basis to the maximum extent practicable.¹⁹⁹

NNSA required the use of fixed-price subcontracting in order to generate competition and control costs.²⁰⁰ The Contracting Officer explained that “[t]he prohibition against the prime contractor performing construction was part of the original acquisition strategy” and that the purpose behind this construction performance strategy “was to minimize the government’s risk of cost growth.”²⁰¹ Additionally, NNSA expected that “by competing the construction subcontracts, and awarding as many as possible on a fixed price basis ... the government would achieve the best prices.”²⁰²

3. MOX Services’ Proposal Contemplated Only A Construction Management Role

MOX Services drafted its Technical and Cost Proposals to comply with the NNSA-directed construction performance strategy, including both the Construction

¹⁹⁸ Exhibit 2, Mod 124, at J.1.39 (Option 1 SOW “Construction Management Services”).

¹⁹⁹ Exhibit 2, Mod 124, at J.1.40.

²⁰⁰ See generally Exhibit 9 (regarding Exercise of Option 1 and listing construction objectives, including procurement of “all construction activities on a competitive fixed-price basis to the maximum extent practicable”); see also Exhibit 2 at I.5 (incorporating by reference FAR 52.244-2 and FAR 52.244-5, calling for competition in subcontracting and the Government’s consent to subcontract).

²⁰¹ Exhibit 15, Carol Elliott E-mail to Sue King, Oct. 20, 2008. In fact, the prohibition “was included in most of the acquisition strategy documents. It was also included [in] the action memo signed by the Secretary approving the contract award.” *Id.*

²⁰² *Id.*

Prohibition and the fixed-price subcontracting requirement.²⁰³ MOX Services' Technical Proposal outlined its construction management role and stated that construction efforts on the Project would be undertaken by fixed-price subcontractors.²⁰⁴ MOX Services included a basis of estimate for Construction Management that mirrored the work scope contemplated by its Technical Proposal.²⁰⁵

a. MOX Services' Construction Management Plan

In its limited role as construction manager, MOX Services was responsible for contracting with and managing subcontractors.²⁰⁶ MOX Services' Construction Management organization was "[r]esponsible for overall strategic direction, leadership, and integration for all construction site employees, subcontractors, and site activities."²⁰⁷ MOX Services planned to undertake "effective management and coordination of the large number of onsite contractors and vendors."²⁰⁸ MOX Services proposed to establish "the overall management and administrative requirements for construction" and to flow down those requirements to subcontractors and sub-tier suppliers.²⁰⁹ MOX Services also anticipated preparing guidance documents for subcontractors and vendors, specifying the expectations and requirements for communications, reporting, and coordination with other subcontractors.²¹⁰ MOX Services

²⁰³ Exhibit 35, Option 1 Proposal, Volume I (Technical Approach) at 2-36, 2-37, 3-13 and Volume II (Cost Proposal - Executive Summary) at i (expecting to manage construction work through competitively awarded fixed price construction subcontracts).

²⁰⁴ *See Id.*, Volume I (Technical Approach) at 2-36, 2-37.

²⁰⁵ *See Id.*, Volume II (Cost Proposal) at 1-1, 1-2 and Work Breakdown Structure Element Definition for Utility Equipment & Piping (Cost Content explained as "Subcontract Effort: All-inclusive, firm fixed price contract for material, fees, and labor and installation costs") and Work Breakdown Structure Element Definition for Electrical (Cost Content explained as "Subcontract Effort: All-inclusive, firm fixed price contract for material, fees, and labor and installation costs").

²⁰⁶ *See* Exhibit 13, PEP, at ¶ 6.1.3. Incorporated by reference into the Contract, the Project Execution Plan outlines MOX Services' "Subcontracting and Procurement Strategy." *Id.* As part of this strategy, MOX Services intended to employ subcontractors to serve as general contractors for construction. *Id.* The Project Execution Plan explains that "[u]nlike a construction manager, a general contractor would execute a significant scope of its assigned work, and perhaps all of it, with its own forces." *Id.*

²⁰⁷ Exhibit 35, Option 1 Proposal, Volume I (Technical Proposal) at 3-13.

²⁰⁸ *Id.* at 2-39 and 3-75.

²⁰⁹ Exhibit 13, Project Execution Plan at ¶ 6.1.3.

²¹⁰ Exhibit 35, Option 1 Proposal, Volume I (Technical Proposal) at 2-39 and 3-75.

would not have primary responsibility for quality assurance, but would “oversee and evaluate” subcontractor and supplier quality assurance plans and programs.²¹¹ MOX Services anticipated developing QA/QC procedures and protocols, and performing quality assurance audits of suppliers and subcontractors.²¹²

b. MOX Services’ Construction Subcontracting Plan

MOX Services’ role as Construction Manager was reflected throughout its subcontracting plan. MOX Services planned to provide construction management and administration, quality assurance, and related oversight.²¹³ Its Construction Area Managers were tasked with managing and maintaining “the integration of all subcontractor activities, ensuring that the work is completed in a safe and efficient manner.”²¹⁴ They would also “monitor subcontractor activities for adherence to cost and schedule baselines,” to “coordinate and oversee all subcontract development, procurement, management of subcontractors, and subcontract closeout.”²¹⁵ But the primary construction work and its direct supervision, inspection and quality assurance would be the responsibility of the subcontractors themselves.²¹⁶

MOX Services expected that construction subcontractors, suppliers, and vendors would procure, erect, and install the facilities.²¹⁷ Its basis of estimate for Construction Management mirrored the work scope contemplated by its Technical Proposal. For example, the cost content included in MOX Services’ basis of estimate for piping, electrical, structural, and HVAC was based on the efforts of subcontractors operating under all-inclusive, firm fixed-price contracts for material, fees and labor, and installation.²¹⁸ Moreover, MOX

²¹¹ Exhibit 17, BCP #05-011 at 1.

²¹² *Id.*

²¹³ *See generally* Exhibit 35, Option 1 Proposal, Volume I (Technical Proposal) at 2-36 (addressing MOX Services’ plan for Construction Management and Administration).

²¹⁴ *Id.* at 3-13.

²¹⁵ *Id.*

²¹⁶ *See Id.* at Volume I (Technical Proposal) at 2-36 (explaining MOX Services’ construction subcontract strategy to include awarding competitive subcontracts to construction subcontractors to build the facilities).

²¹⁷ *See Id.*

²¹⁸ *See, e.g.,* Exhibit 35, Option 1 Proposal, at Work Breakdown Structure Element Definition for Utility Equipment & Piping and Work Breakdown Structure Element Definition for Electrical.

Services included a list of all planned fixed-price construction subcontracts in Exhibit 2-7 of its Technical Proposal.²¹⁹

4. NNSA Accepted The Risk That Its Strategy Might Fail

Wary that the complexity of this first-of-a-kind nuclear facility to be built under strict NRC regulations would severely limit the pool of capable subcontractors willing to take on fixed-price subcontracts, MOX Services sought to control the risk inherent in NNSA's chosen strategy. In preparing its cost estimate, MOX Services excluded from the scope of the Contract the risk that the performance strategy might fail. In its Basis of Estimate, MOX Services notified NNSA that the estimate depended on a sufficient number of capable fixed-price subcontractors materializing:

The estimate assumes an adequate number of suppliers, vendors and subcontractors with NQA-1 programs that have capacity and technical capabilities to support project schedule.²²⁰

In addition, MOX Services' cost estimate assumed that subcontractors would bring their mature and compliant nuclear quality assurance programs to the Project.²²¹

This estimate assumes that the sub-contractors and their suppliers will have a compliant QA program which can be verified through audit prior to their initiation of work on the MFFF. Since the subcontractors and suppliers have not been selected and contracted, the effort needed to bring their QA programs to the level of a NQA-1 program is uncertain. Recent DOE project experience at the Hanford Vitrification Plant has indicated that finding qualified suppliers is problematic.²²²

During the Option 1 proposal evaluation, DOE's Project Controls Manager acknowledged these "key technical assumption(s)" included the assumption "that there are manufacturing vendors with NQA-1 programs to provide adequate competition and scope implementation."²²³

²¹⁹ Exhibit 35, Option 1 Proposal, Volume I (Technical Proposal) at 2-37 (providing summary of major subcontracts for MFFF construction).

²²⁰ Exhibit 17, BCP #05-011, MA 15 Basis of Estimate (pertaining to construction supervision of MFFF, Quality Assurance).

²²¹ *See id.*

²²² *Id.*

²²³ DOE report "Technical Input for Cost Analysis" at 28 (July 28, 2006) ("Exhibit 70"). DOE confirmed its assumption of the risk in its paper, "NQA-1, An Overview for Federal Project Directors." DOE's document quotes Federal Project Director, Clay Ramsey:

B. Change In Contract Requirements: The NNSA-Directed Construction Performance Strategy Proved Unworkable

NNSA's construction performance strategy failed because it could not be executed without substantial cost increases and unacceptable quality risks. Long after NNSA's strategy failed, NNSA finally abandoned it and ultimately issued Modification 152 to formally eliminate the Contract's Construction Prohibition provision, incorporating in its place a "Self Performance" provision, and eliminating the fixed-price subcontract mandate.

1. NNSA's Construction Performance Strategy Failed To Generate Adequate Subcontractor Competition

Despite MOX Services' diligent efforts, willing and capable subcontractors refused to bid on fixed-price contracts at cost-effective rates. On March 14, 2006, MOX Services advertised the structural concrete construction package on the Federal Business Opportunity website as well as the DCS MOX website.²²⁴ Throughout the solicitation process, MOX Services' Construction and Procurement team contacted 72 firms, sent the full RFP to eight pre-qualified firms,²²⁵ and responded to 229 bidder questions.²²⁶

MOX Services provided prospective structural concrete subcontractors with a detailed scope of work.²²⁷ It explained that the structural subcontractor would be responsible for supplying all of the labor, materials, equipment, and services necessary to construct the Project's main concrete structure, and that it must do so on a firm fixed-price basis.²²⁸ Fifteen of the firms that expressed an interest in the structural concrete construction

What we did not allow for was that with the equipment suppliers who advertise that they have a NQA-1 program, those programs have sat on the shelf for many, many years...It would quickly become apparent that the suppliers really didn't know what they were doing as far as NQA-1.

Exhibit 27 at 12.

²²⁴ Letter DCS-DOE-002581 from David Stinson, President, Duke Cogema Stone & Webster, to James Bieschke, Office of Acquisition and Assistance, DOE (July 31, 2006) ("DCS July 31, 2006 Letter") (requesting authorization to use a cost plus incentive fee contract for structural concrete construction) ("Exhibit 71").

²²⁵ CP 20 Strategy Rev. 2 ("Exhibit 72").

²²⁶ CP 20 Talking Points Rev. 3 ("Exhibit 73").

²²⁷ See Section G (Summary of Work For The MOX Fuel Fabrication Building (BMF) Structural Scope of Work) ("Exhibit 74").

²²⁸ *Id.* at ¶ 1.1.1.

opportunity represented that they were pre-qualified for NQA-1 work,²²⁹ but only six of them attended the pre-proposal conference, and only one of those submitted a proposal.²³⁰

Although it resulted from a competitive process, the Kiewit Federal Group's ("Kiewit") June 2006 proposal for structural construction of \$393 million was more than double MOX Services' estimate of \$182 million.²³¹ MOX Services analyzed its estimate against Kiewit's proposal,²³² and concluded that the disparity could not be reduced sufficiently to justify award on a fixed-price basis.²³³ Comparing its estimate and Kiewit's proposal, 60% of the Project and Project labor were in alignment.²³⁴ The only areas left that could account for the substantial differences included risk, contingency for unknowns associated with work on a DOE facility, NRC regulations, unstable funding and escalation.²³⁵ The magnitude of these concerns could not be adequately resolved or minimized to any meaningful extent through fixed-price contracting.

²²⁹ It is important to note that many of the prospective subcontractors did not have NQA-1 experience and MOX Services would later discover the limited scope of their qualifications. Some of the first clues of the lack of qualification of prospective subcontractors were in their pricing – they either grossly underestimated the quality requirements or included excessive contingency to compensate for their inexperience.

²³⁰ See Exhibit 71, DCS July 31, 2006 Letter. The dearth of qualified subcontractors was well documented in contemporaneous Government reports and Peer Reviews. See Exhibit 20, GAO Report GAO-14-231. Recognizing the problem and looking ahead, MOX Services even initiated programs with local technical schools and high schools to offer 2-year technical degrees and craft training to mitigate the risk of a craft resource shortage. Exhibit 44, January 2010 Monthly Status Report.

²³¹ Exhibit 71, DCS July 31, 2006 Letter (requesting authorization to use CPIF contract for structural concrete construction).

²³² See CP 20 Bid Analysis Rev. 2 ("Exhibit 75"); CP 20 Cost Analysis Rev. 5 ("Exhibit 76"); CP 20 Unresolved Pricing Issues ("Exhibit 77"); Exhibit 73, CP 20 Talking Points Rev. 3.

²³³ See Exhibit 71, DCS July 31, 2006, Letter.

²³⁴ *Id.*

²³⁵ *Id.*

2. **MOX Services' Continuing Efforts To Execute NNSA's Failed Construction Performance Strategy & Request For Waiver Of That Strategy**

a. **MOX Services Sought Waiver Of The SOW's Fixed-Price Subcontracting Requirement**

Upon receiving Kiewit's contingency-laden proposal, it was clear that NNSA's original strategy was unworkable, and so MOX Services requested DOE's authorization to use a cost plus incentive fee ("CPIF") contract in lieu of a firm fixed-price contract for the structural concrete construction package.²³⁶ In its July 31, 2006 letter, MOX Services explained that using a CPIF type contract would help "significantly reduce the overall cost of this work by essentially removing all contingency ... included in Kiewit's proposal."²³⁷ DOE did not approve MOX Services' request. Following meetings, clarifications, and scope reductions, MOX Services invited Kiewit to submit a revised proposal. On August 8, 2006 Kiewit submitted a revised proposal for \$267 million, which was \$85 million higher than MOX Services' estimate for the work.²³⁸ MOX Services did not award the contract.

MOX Services again tried to stimulate competition to build the concrete structure. It divided the work into three packages and reduced the overall scope of work in an effort to render it more bondable for more firms, and reduce their risk level. The scope reduction included approximately three-quarters of the original structural concrete work, eliminating setting trapped tanks, painting, and the Quality Control inspection requirements (which MOX Services took on as its own responsibility).²³⁹ MOX Services again advertised the opportunity on the Federal Business Opportunity website and made direct contact with nine firms, sending a new Advance Notice to 45 firms.

MOX Services received two proposals for the first phase of the work. Kiewit bid \$42 million and Baker Concrete Construction, Inc. ("Baker") bid \$37.5 million. Baker won the award for the first phase, and would go on to win all three phases of the structural work on a fixed-price basis.

Baker completed the first phase but experienced challenges during the second. As a result of Baker's technical capability problems, MOX Services began expending more time and resources managing the subcontractor. MOX Services also began taking on the

²³⁶ *Id.*

²³⁷ *Id.*

²³⁸ *See* Kiewit Bid Analysis ("Exhibit 78").

²³⁹ MOX Services concluded that construction firms willing and able to bid on work of this magnitude would not have the established capability to perform inspections properly. As such, MOX Services took on the QC responsibility.

subcontractor's work, including quality control. Baker's contract was descoped effective June 2010.²⁴⁰ All unfinished scope on the second and third phases was awarded, on a T&M basis, to Alberici Constructors, Inc.²⁴¹ The transition to the new installation contractor had to be carefully managed to maintain production and quality. MOX Services continued to apply significant quality assurance and engineering resources to assist its subcontractors.²⁴² Other work would also be subcontracted on a T&M basis with increased success.²⁴³

b. MOX Services Sought Waiver Of The Contract's Construction Prohibition Clause

Still unable to execute NNSA's failed construction performance strategy without jeopardizing key aspects of the construction effort, MOX Services sought NNSA's permission to waive another aspect of the strategy, namely the Construction Prohibition clause. In its Option 1 Proposal, MOX Services stated that although it "would be preferable to delete [the Construction Prohibition] clause altogether," it proposed to amend the clause to allow it to perform certain construction efforts, as approved by the Contracting Officer.²⁴⁴ DOE denied the request and required MOX Services to proceed based on the unchanged strategy.²⁴⁵

In March 2009, MOX Services again requested that NNSA waive the Construction Prohibition clause, explaining that it would self-perform those particular construction efforts "where subcontracting represents an unacceptable risk to safety, quality and cost

²⁴⁰ See MOX Fuel Fabrication Facility, Project Estimate at Completion (EAC) 2010 (Aug. 2010) at Budget Transfers Since 2009 EAC, Construction Section ("Exhibit 79"); Shaw AREVA MOX Services, LLC, Trend Notice 10-0252, CP-20 (Structural) EAC Associated with Contract for Release 2 and 3A Scope (Nov. 30, 2010) ("Trend No. 10-0252") ("Exhibit 80).

²⁴¹ See MOX Fuel Fabrication Facility, Project Estimate at Completion (EAC) 2011 (July 2011) at New 2011 EAC Trends ("Exhibit 81"); Exhibit 80, Trend No. 10-0252.

²⁴² See MOX Fuel Fabrication Facility, December 2009 Monthly Status Report ("Exhibit 82").

²⁴³ See, e.g., Letter DCS-DOE-003343, from Paul Simons, Director of Procurement and Property, Shaw AREVA MOX Services, LLC, to Carol Elliot, Contracts Specialist, NNSA (Sept. 15, 2009) (Superior Air Handling T&M contract for HVAC ductwork installation) ("September 15 Letter") ("Exhibit 83).

²⁴⁴ Draft Option 1 Proposal With Comments, at Cost Proposal 6-4 ("Exhibit 84).

²⁴⁵ See *id.* at 6-2.

effectiveness of the project.”²⁴⁶ MOX Services explained that self-performance had been used successfully on other major projects, citing the Hanford Waste Treatment Plant, the Tritium Extraction Facility at the Savannah River Site, and the National Ignition Facility at the Lawrence Livermore National Lab.²⁴⁷ MOX Services also proposed to perform a formal make versus buy analysis to ensure that self-performance was in the best interest of the government.²⁴⁸

3. Acknowledging The Longstanding Failure Of Its Construction Performance Strategy, NNSA Issued Modification 152

NNSA ultimately acknowledged the failure of its construction performance strategy. Issued on April 12, 2010, Modification 152 removed the Contract’s prohibition on self-performing construction work and the associated requirement to subcontract all construction work on a fixed-price basis.²⁴⁹ The abandonment of the original construction strategy fundamentally changed MOX Services’ construction manager role to that point, allowed MOX Services to self-perform construction activities when in the best interest of the Project, and incorporated MOX Services’ suggestion that a make or buy analysis be conducted to ensure that self-performance was in the best interests of the project.²⁵⁰

C. MOX Services Is Entitled To Fee On The Increased Costs Due To NNSA’s Change In Construction Performance Strategy

The failure of NNSA’s construction performance strategy changed the contract. Modification 152 recognized this change and abandoned the basis of MOX Services’ cost estimate.²⁵¹ The failure of the construction performance strategy was thus a constructive change under the Changes clause that entitles MOX Services to fee on the resulting cost increases. Under the Changes clause,²⁵² a change in the “plans and specifications or instructions incorporated in the contract” requires the Contracting Officer to make an adjustment in the (i) estimated cost, delivery/completion schedule, or both; (ii) the amount of

²⁴⁶ Letter DCS-DOE-003221, from G.W. Painter, Contracts Manager, Shaw AREVA MOX Services, LLC, to Carol Elliott, NNSA Operations Office (March 12, 2009) (“Exhibit 85”).

²⁴⁷ *Id.*

²⁴⁸ *Id.*

²⁴⁹ Contract DE-AC02-99CH1088, Modification No. 152 (April 12, 2010) (“Exhibit 14”).

²⁵⁰ *Id.* at 3.

²⁵¹ *See id.* at 1 (“This supplemental agreement is entered into pursuant to authority of: FAR 52.243-2 Changes – Cost-Reimbursement (AUG 1987) and Alternate II (APR 1984), FAR 52.232-22 Limitation of Funds (APR 1984) and mutual agreement between the parties.”). Modification 152 did not contain any release language.

²⁵² FAR 52.243-2(a) (Alt. III) (Apr 1984).

any fixed fee; and (iii) any other affected terms.²⁵³ The Changes clause is applicable even where a contractor has entered into a bilateral modification.²⁵⁴

1. The Change In The Method Of Performance Entitles MOX Services To Additional Fee

The Boards of Contract Appeals have held that a change in the method of performance is a fee-bearing change under the Changes clause.²⁵⁵ In *ITT Federal Services International Corp.*, the ASBCA explained that even where the deliverable or the nature of the work remained the same, modifications to the method of performing the work are changes within the Changes clause.²⁵⁶ Noting that “changes requiring a contractor to use different means or methods of performance than initially contemplated ... routinely fall within the ambit of the Changes clause,” the Board held that such a change entitled the contractor to a fee increase.²⁵⁷

In *ITT*, the Army had awarded cost-plus-fixed-fee contracts for operation and maintenance services on Army bases in Germany. The contractor’s fee was negotiated as a percentage of the estimated costs. During performance, contrary to an express condition of *ITT*’s proposal, over 200 employees were reclassified under the governing Status of Forces

²⁵³ FAR 52.243-2(b); see *Space Gateway Support, LLC*, ASBCA No. 55608, 55658, 13-1 BCA ¶35,232 (Jan. 29, 2013) (finding that the specific reference to “fixed fee” did not bar a possible adjustment in the amount of the “award fee” pool as part of an equitable adjustment under the “other affected terms” provision of the Changes clause).

²⁵⁴ See, e.g., *Nat’l Steel and Shipbuilding Co. v. United States*, 49 Fed. Cl. 579, 590 (2001) (allowing recovery under contract’s changes clause where damages outside scope of bilateral modification); *Crane Carrier Corp.*, ASBCA No. 9822, 65-2 BCA ¶ 4945 (June 30, 1965) (agreement only covered costs resulting from modifications expressly referred to). The FAR states that unilateral changes are used to “[m]ake changes authorized by clauses other than a changes clause,” thus indicating that the Changes clause governs bilateral modifications. See FAR 4.103(b)(3).

²⁵⁵ See, e.g., *C.H. Hyperbarics, Inc.*, ASBCA No. 53077 et al, 04-1 BCA ¶ 32568 (Mar. 23, 2004) (finding that where the Government limits or changes a contractor’s manner of performance under a contract for design and installation, “the action constitutes a compensable change under the contract”).

²⁵⁶ ASBCA No. 54001, 06-1 BCA ¶ 33163 (Dec. 29, 2005).

²⁵⁷ *Id.* The *ITT Federal Services* decision is notable because the Board borrowed analysis from fixed-price cases and found that a cost reimbursement type contract “does not warrant a different conclusion.” See also *Thomas O’Connor & Co., Inc.*, ASBCA No. 15123, 71-2 BCA ¶ 8926 at 41,500-02 (June 21, 1971) (permitting an increase in the fixed fee on a cost plus fixed fee contract where the change in in the work week caused delay in performance).

agreement from a “non-technical” to a “technical” status. This subjected ITT for the first time to certain German taxes, and made the employees newly ineligible for Army-subsidized benefits.²⁵⁸ This reclassification made the contract much more costly and complicated for ITT to perform. Workers became much more difficult and expensive to recruit and retain, and the reclassification greatly increased ITT’s administrative burden.

The Army paid ITT’s increased costs, but refused to increase the fee, arguing that the reclassifications involved no new work or extra contract effort.²⁵⁹ The Board disagreed, observing that, among other things, ITT was required to implement extensive changes in its personnel practices and to incur unexpected legal, tax and other expenses.

The Board held that the worker reclassification “changed the basis of the bargain,” which was premised on workers retaining “non-technical” status. Moreover, ITT had “unambiguously conditioned its cost and fee proposal” on that premise, from which the Army had benefitted.²⁶⁰ In awarding ITT increased fee, the Board reasoned that ITT’s additional fee entitlement flowed from the contract change and the associated revised risks.²⁶¹

All of the elements that entitled the contractor to additional fee in *ITT* exist here. In both instances, the work product provided to the Government did not change. Just as ITT had, MOX Services based its cost estimates on an express presumption that, through no fault of its own, did not last. As in *ITT*, the fee here was negotiated as a percentage of estimated costs.

Moreover, the impact on MOX Services of the change in construction performance strategy is directly analogous to the impact the employee reclassification had on ITT. The change in *ITT* augmented the contractor’s administrative burden greatly. Instead of being able seamlessly to recruit former Army personnel who could continue to rely on Army-subsidized schooling, medical, recreation, and other benefits, ITT had foisted upon it the difficult and complicated task of recruiting and retaining to an overseas location employees who could not rely on an existing, Americanized infrastructure of services. Further, ITT incurred additional expenses in navigating the German accounting, tax, and human resources rules.

Likewise, here the failure of NNSA’s construction performance strategy changed MOX Services’ role from construction manager to constructor and entailed additional complex administrative, managerial, quality control, and other responsibilities. No longer

²⁵⁸ ASBCA No. 54001, 06-1 BCA ¶ 33163 (Dec. 29, 2005).

²⁵⁹ *Id.*

²⁶⁰ *Id.*

²⁶¹ *Id.*

could MOX services rely on fixed-price subcontractors to perform, supervise, schedule, coordinate, and inspect the work, secure in the knowledge that if the governing NQA-1 standards were not met, the subcontractors would be liable. All of these burdens – plus recruiting, training, accounting, human resources, and myriad other functions – now fell squarely on MOX Services. In these circumstances, as in *ITT*, the changed means of performing the work, not contemplated at the time of contracting, entitles MOX Services to fee on the resulting additional costs.

In other circumstances, too, the Boards have recognized that where an abandoned methodology served as the basis for an offeror's price proposal, the change triggers the offeror's rights under the Changes clause.²⁶² In *Associated Aero Science Laboratories, Inc.*,²⁶³ the Board recognized that the contractor negotiated its fee based on work estimates of direct labor cost and numbers of employees at each of two installations, such that the "shifts from on-station to contractor facility work, and the added responsibilities of supervising a different mix of employees did in fact constitute a change."²⁶⁴ As a result, the Board found that the change entitled the contractor to an equitable adjustment in both cost and fee:

Since the fixed fee was negotiated based upon a pattern of work which was included in the contract by way of estimates of direct labor cost and numbers of employees at each installation, it is our opinion that the drastic shifts from on-station to contractor facility work, and the added responsibilities of supervising a different mix of employees did in fact constitute a change. For this change, appellant is entitled to an equitable adjustment in the fixed-fee.²⁶⁵

Here, NNSA directed the construction performance strategy, requiring MOX Services to perform as the Project's construction manager and prohibiting MOX Services from self-performing construction. When its strategy failed, NNSA issued Modification 152 to remove the original prohibitions on the method of performance which had proven unworkable.

In *Associated Aero Science*, the change that reduced on-station work and increased work at the contractor's facilities required that the contractor recruit, train, and supervise a different class of employee, at a different location, than the parties had bargained for. Here,

²⁶² See, e.g., *Environmental Safety Consultants, Inc.*, ASBCA No. 53485, 05-1 BCA ¶ 32903 (March 8, 2005) (granting offeror "costs incurred in performing the work using a method different than what appellant planned in bidding" on the fixed-price contract to remove, transport, and dispose of industrial waste sludge from two lagoons at a Naval facility).

²⁶³ ASBCA Nos. 15451, 15634, 72-1 BCA ¶ 9293 at 43,059 (Jan. 25, 1972).

²⁶⁴ *Id.*

²⁶⁵ *Id.*

then, as in *Associated Aero Sciences*, MOX Services' new role required it to take on many administrative, managerial and support functions that the parties had expected would be performed by fixed-price subcontractors. And, as in *Associated Aero Sciences*, MOX Services' change from construction manager to constructor constitutes change in the method of performance for which the government is responsible. As a result, MOX Services is entitled to fee on the increased costs caused by the change.

Relatedly, Boards have also recognized that the Government assumes responsibility for the specifications it supplies for preparing estimates and performing the work.²⁶⁶ As a result, when defective specifications are encountered, the contractor is entitled to recover the increased expenditures caused by the defect.²⁶⁷ NNSA's construction performance strategy is much like a defective specification. NNSA owned and directed the performance strategy. NNSA's strategy failed, and, like a defective specification, had to be changed. On these facts MOX Services to a fee adjustment that compensates MOX Services for the additional costs NNSA causes to be expended on the Project.

2. MOX Services Is Entitled To A Fee Increase To Account For Risks Excluded From Its Cost Estimate

MOX Services' cost estimate assumed "an adequate number of suppliers, vendors and subcontractors with NQA-1 programs that have capacity and technical capabilities to support project schedule."²⁶⁸ It further assumed "that the subcontractors and their suppliers will have a compliant QA program which can be verified through audit prior to their initiation of work on the MFFF."²⁶⁹ Thus, MOX Services excluded from its cost estimate the risk of not having enough qualified subcontractors to provide competition.

The Boards have recognized that a close relationship between contract scope and estimated cost "is both a legal and a practical requirement."²⁷⁰ Where the cost of certain

²⁶⁶ *Consolidated Diesel Elec. Corp.*, ASBCA No. 10486, 67-2 BCA ¶ 6669 (Oct. 17, 1967).

²⁶⁷ *See, e.g., Big Chief Drilling Co. v. United States*, 26 Cl. Ct. 1276 (1992) (defective specification case resulting in award of lost profits on the amounts which the contractor was forced to expend to correct the problem); *Wu & Associates, Inc.*, LBCA No. 2003-BCA-1, 07-2 B.C.A. ¶ 33595 (Jan. 5, 2007) (defective specification case involving lost profit award); *J.W. Bateson Co., Inc.*, VABCA No. 1148, 79-1 BCA ¶ 13573 (Dec. 14, 1978) (defective specification case involving award of costs and fee, remanding to the parties to negotiate the amount of fee).

²⁶⁸ Exhibit 17, BCP #05-011, MA 15 Basis of Estimate.

²⁶⁹ *Id.* MOX Services also noted that it was uncertain how much effort would be needed to elevate some subcontractors' QA programs to the NQA-1 standard. *Id.*

²⁷⁰ *H.K. Ferguson Co.*, ASBCA 2826, 57-1 BCA ¶ 1293 (March 29, 1957). *Ferguson* is discussed in greater detail in "Unknown Complexity" Section of this Claim, which addresses

work is omitted from a contractor's estimate, that work is outside the scope of the contract.²⁷¹ When the work not contemplated by the parties materializes, the increased costs must be considered in the contractor's entitlement to fee.²⁷²

Here, excluding the risk that the marketplace could not provide sufficient qualified, capable subcontractors to generate competition involved a clear trade-off between the parties. The parties' negotiated fee was based on assumptions imbedded in cost estimates that proved unfounded. When these assumptions failed to materialize, NNSA became liable not only for the additional costs, but also for additional fee on those costs. In these circumstances, under the Changes clause, NNSA must adjust MOX Services' fees in a manner commensurate with the resulting additional costs.

D. Impact

MOX Services incurred increased costs as a result of the change to the construction performance strategy. MOX Services experienced such cost growth in connection with: (i) increased construction management scope and (ii) increased QA/QC resources to provide Quality Assurance support to vendors. The total cost growth on construction related activities as of the 2012 Rebaseline with Addendum, and identifying cost growth incurred through April 2013, is summarized in the following chart:

Chart IV.1 Total Construction Performance Strategy Cost Growth with Incurred Portion Through April 2013²⁷³

	[A]	[B]	[C] = B-A	[D]
Claim Category	2007 Baseline	2012 Rebaseline with Addendum	Cost Growth	Incurred Claim Growth Through April 2013
QA - Construction	\$ 16,659,849	\$ 122,203,946	\$ 105,544,098	\$ 48,802,163
Construction Management	61,514,495	214,585,261	153,070,766	60,665,945
Construction Strategy Change Total	\$ 78,174,343	\$ 336,789,207	\$ 258,614,864	\$ 109,468,108

MOX Services' entitlement to fee to increased costs related to the purchase and installation of process units.

²⁷¹ *Id.* ("To say that the scope of the contract includes a substantial amount of work that was not taken into account in determining the estimated cost is to say that the contract was entered into in violation of law.").

²⁷² *Id.*

²⁷³ See Schedule 1.2.

The sections that follow detail the impact of this cost growth.²⁷⁴

1. Impact: Construction Management Cost Growth

To accomplish the concrete structure work within its circumscribed role of construction manager, MOX Services had to break up the planned complex construction packages into numerous discrete work elements. MOX Services augmented and reorganized its workforce to undertake increased construction management responsibilities not contemplated by its Option 1 proposal. In this section, MOX Services quantifies its construction management cost growth, as measured by the difference between the 2007 Baseline and 2012 Rebaseline with Addendum estimates. The following chart summarizes this cost growth, and shows the incurred portion of this growth through April 2013:

Chart IV.2 Construction Management Cost Growth²⁷⁵

Cost Account	Cost Account Description	[A] 2007 Baseline	[B] 2012 Rebaseline with Addendum	[C] = B - A Cost Growth	[D] Incurred Claim Growth Through April 2013
1504.8541	Supervision / Admin	\$ 21,437,033	\$ 107,636,857	\$ 86,199,824	\$ 23,741,642
1500.8501	Management / Admin	23,522,195	63,202,558	39,680,363	19,903,633
1500.8502	Project Controls	10,943,800	32,745,008	21,801,208	12,427,356
All Other		5,611,467	11,000,838	5,389,371	4,593,314
Total Construction Management		\$ 61,514,495	\$ 214,585,261	\$ 153,070,766	\$ 60,665,945

As of the 2012 Rebaseline with Addendum estimate, MOX Services estimated that it would incur \$153,070,766 in cost growth for Construction Management to address the need for more construction management staff to manage the greater quantity of small work packages to complete the construction effort. Additionally, due to the overall delays in the completion of the Option 1 effort, MOX Services' construction management staff would be required for a longer duration on the Project.²⁷⁶

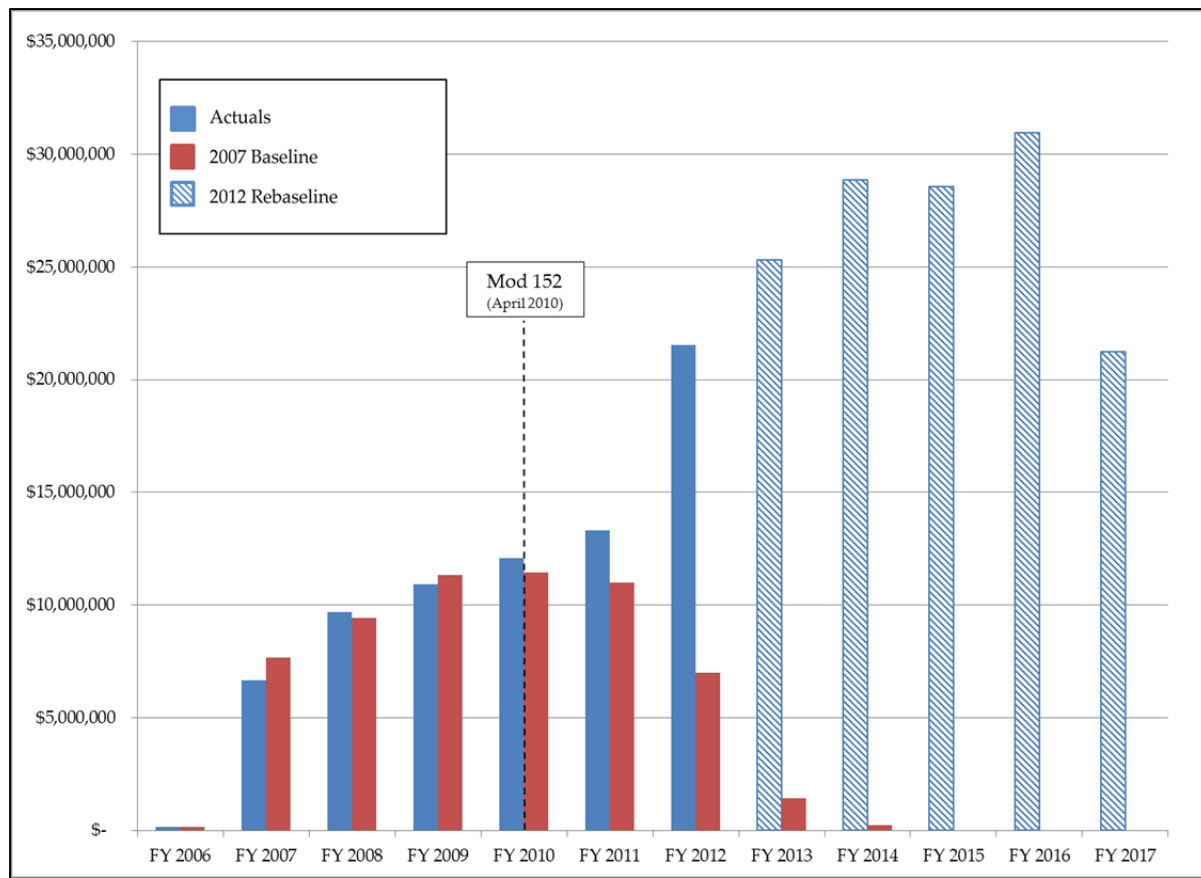
²⁷⁴ MOX Services also experienced cost growth due to a lack of competition among construction subcontractors and inefficiencies caused by lack of qualified vendors. These savings from competition contemplated in the original estimate would account for some of the difference between the 2007 Baseline and the 2012 Rebaseline. Although MOX Services has not attempted to separately determine these costs as part of this claim, it acknowledges this potential alternative basis for entitlement for fee on increased costs of performance.

²⁷⁵ See Schedules 1.22 and 4.2.

²⁷⁶ In its September 2008 Monthly Variance Report, MOX Services documented the fact that its own expected staffing levels would increase in order to oversee the execution of Time &

The following chart compares MOX Services' estimated construction management labor costs from the 2007 Baseline against actual such costs and its 2012 Rebaseline estimates of these costs in future years.

Chart IV.3 Construction Management Labor Cost Comparison FY06 – FY17²⁷⁷



The red bars represent MOX Services' estimated construction management labor costs in the 2007 Baseline. The blue bars represent MOX Services' actual labor costs through 2012. The blue textured bar represents MOX Services' construction management cost estimate for FY13 – FY17 as reflected in the 2012 Rebaseline.

Construction Management is generally considered to be a Hotel Load activity and is estimated as such. Under the 2007 Baseline estimate (red bars), the great majority of the construction effort was expected to be incurred between FY08 – FY11, to include scheduled completion of the concrete structure in FY11. The 2007 Baseline estimate anticipated fairly

Materials subcontracts. *See* Sept. 2008 Monthly Variance Report (Corrective Action under 15.00 and 15.05) ("Exhibit 86).

²⁷⁷ *See* Schedule 4.21.

consistent effort in FY08 – FY11, followed by steep reductions in FY12 and FY13 as the Project neared completion.

The foregoing chart also demonstrates that between FY07 and FY10, MOX Services' actual costs (blue bars) were generally consistent with the 2007 Baseline estimate (red bars). After Modification 152, it became increasingly difficult to implement and manage the NNSA-directed construction performance strategy. MOX Services' actual costs began to outpace its estimated costs in FY10, and this difference became more pronounced in FY11 and FY12. Further, the chart shows that the 2012 Rebaseline estimates that the majority of the increased cost will be incurred in FY13 – FY17. These higher costs, which average about \$27 million/year in FY13 – FY17, reflect the increased construction management complexity and effort MOX Services will incur in managing craft installers (pipefitters, electricians, HVAC mechanics, etc.) now that the structure is complete.

2. Impact: Quality Assurance / Quality Control Cost Growth Associated With Additional Construction Efforts

MOX Services also experienced a significant change in scope in QA/QC, a critical support function for the Project. The change in MOX Services' quality assurance scope of work and the corresponding cost growth of nearly \$68 million through April 2013 was driven largely by the lack of qualified subcontractors available to perform the work and who could meet the required NQA-1 nuclear industry standards.²⁷⁸ It became necessary for MOX Services to embed dedicated MOX Services quality assurance and engineering personnel with suppliers and subcontractors to train personnel and ensure materials and installation met NQA-1 requirements. The total quality assurance cost growth is illustrated below.

²⁷⁸ Root Cause Analysis of Cost Increases 2-20 (2014) (stating that “[t]he atrophy of the US nuclear industry affected the availability of qualified and experienced staff, as well as the nuclear and NQA-1 supply chain”); Exhibit 18; U.S. Gov’t Accountability Office, Rep. No. GAO-14-231, Plutonium Disposition Program: DOE Needs to Analyze the Root Causes of Cost Increases and Develop Better Cost Estimates 20 (2014); Exhibit 20.

Chart IV.4 Total Cost Growth Between 2007 Baseline and Incurred Costs Through April 2013
Management Area 19 – Quality Assurance/Quality Control²⁷⁹

	Amount Through April 2013
2007 Baseline	\$ 10,970,909
Incurred	78,751,690
Cost Growth	\$ 67,780,782

Of this \$67,780,782 amount, about \$49 million stems from quality assurance effort related to constructing the facility, and purchasing and installing commodities, and is discussed here. The remaining amounts (\$12 million related to process units, and \$7 million related strictly to Hotel Load quality assurance costs) are summarized in the chart below, but are discussed in full in other Sections of this claim.

Chart IV.5 Cost Growth Related to Quality Assurance Through April 2013²⁸⁰

	Amount Through April 2013	% of Total
QA Related to Process Units	12,200,541	18%
QA Related to Construction Effort	48,802,163	72%
QA Related to Hotel Load	6,778,078	10%
Total	\$ 67,780,782	100%

The Option 1 Statement of Work required MOX Services to provide construction management services, including “oversight, monitoring and inspection of the vendors to

²⁷⁹ See Schedule 1.214.

²⁸⁰ Construction Strategy Change Schedule 4.1 and source schedules cited therein show the detailed allocation for QA cost accounts. Footnote 158 of the “Process Equipment Changes” section of this Claim describes the allocation methodology used by MOX Services.

ensure quality assurance requirements are met.”²⁸¹ Accordingly, MOX Services’ quality assurance budget and staffing plan in the 2007 Baseline assumed that MOX Services’ quality assurance role would be one of oversight only and that experienced and qualified subcontractors capable of performing work under NQA-1 standards would be available.²⁸² The MOX Services QA group was responsible for maintaining the MOX Project Quality Assurance Plan, which met the NRC’s federal regulatory requirements.²⁸³ The standards contained in the MOX QA plan were to be flowed down to the subcontractors and vendors, who were to develop and implement their own QA programs under the watch of the MOX Services QA organization.²⁸⁴

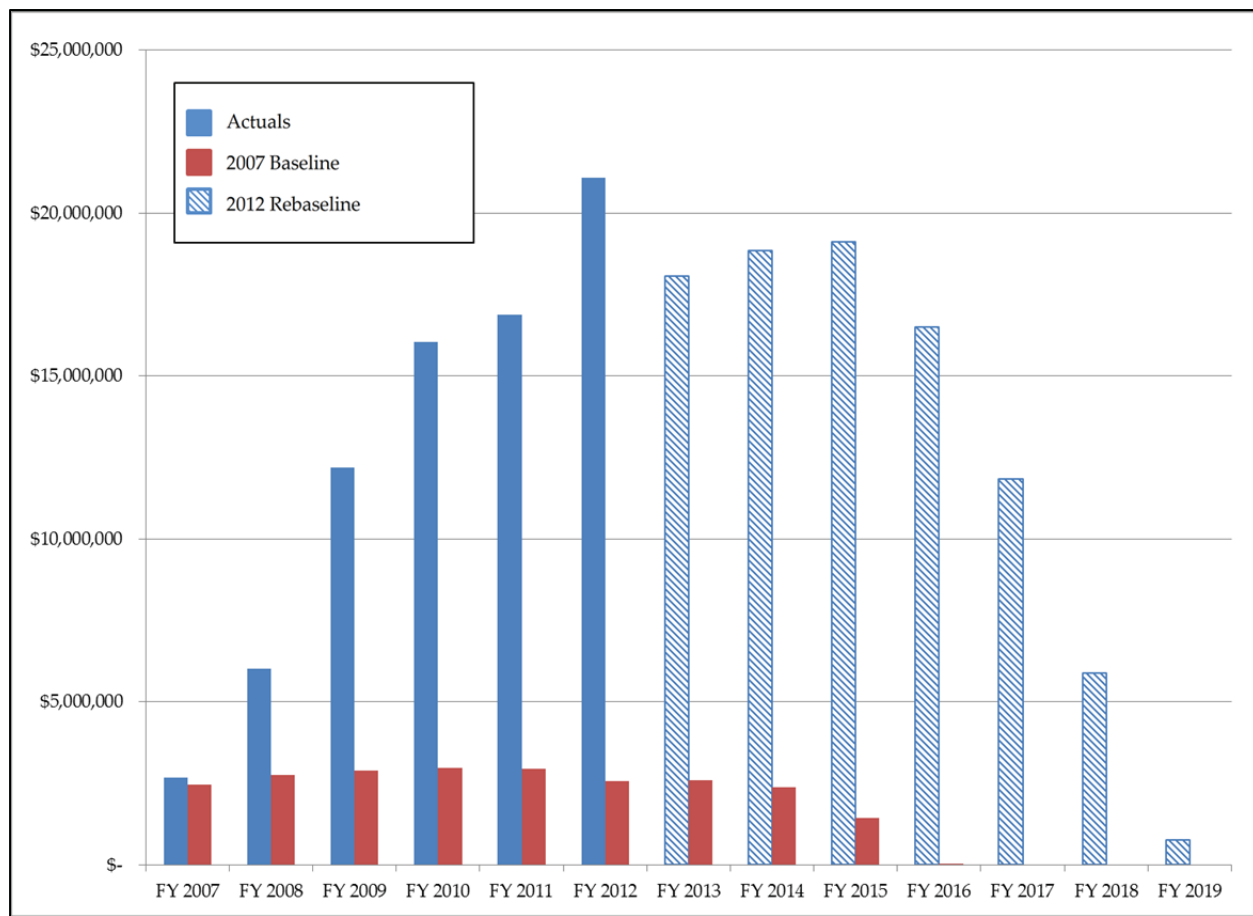
It became clear during the subcontracting process, however, that capable subcontractors were not available in sufficient numbers to provide the required products and services. Very few companies were capable or willing to accept the QA requirements specified by MOX Services in its bid packages. As a result, MOX Services undertook a program mitigation initiative of building and staffing its own QA organization with the appropriate resources to perform the QA functions required to meet NRC standards. This additional scope led to significant cost growth within QA functions. The significant variance between the 2007 Baseline QA estimate and the actual QA work performed and estimated to be performed in the 2012 Rebaseline with Addendum is illustrated in the following chart.

²⁸¹ Letter DCS-DOE-003712 from Robert Walter, Senior Contracts Administrator, Shaw AREVA MOX Services, LLC, to Robert Swett, NNSA (Feb. 18, 2011) (REA 10-022 QA/QC and NQA-1 Vendor Support at 1) (“Exhibit 87).

²⁸² MOX Fuel Fabrication Facility, PCN 10-0346, 2010 EAC: MA 19 Quality Assurance/Quality Control (Nov. 29, 2010) at 1 (“Exhibit 88).

²⁸³ Exhibit 35, Option 1 Proposal, Volume 1 (Technical Proposal) at 2-80 (addressing at ¶ 2.5.3 Quality Assurance (QA)).

²⁸⁴ *Id.*

Chart IV.6 Quality Assurance Cost Comparison FY07 – FY19²⁸⁵

In its 2007 Baseline (red bars), MOX Services estimated that it would incur approximately \$23 million in QA-related costs through FY16. This cost and staffing plan generally reflects a consistent level of effort support and limited oversight throughout the contract performance period. Through FY12, MOX Services had already incurred approximately \$75 million in QA costs (blue bars), over three times the original budget that assumed MOX Services would be performing QA functions in an oversight role. MOX Services expected QA costs to be significantly higher in FY13 than originally planned (blue textured bar) due to the continued impact of NNSA's scope change.

²⁸⁵ See Schedule 4.13.

CB&I AREVA MOX Services, LLC.
Construction Strategy Change Claim Summary

Schedule 4.0

	[A]		[B]		[C] = B - A		[D] = C	
	2007 Baseline		2012 Rebaseline with Addendum		Cost Growth		Claim Growth	
Construction Claim Costs	\$	78,174,343	\$	336,789,207	\$	258,614,864	\$	258,614,864

Sources:

Schedule 4.01

CB&I AREVA MOX Services, LLC.
Construction Strategy Change Claim - Cost Growth

Schedule 4.01

	[A]	[B]	[C] = B - A	[D] = C
Category Description	2007 Baseline	2012 Rebaseline with Addendum	Cost Growth	Claim Growth
Quality Assurance	\$ 16,659,849	\$ 122,203,946	\$ 105,544,098	\$ 105,544,098 ⁽¹⁾
Construction Management	61,514,495	214,585,261	153,070,766	153,070,766
Construction Strategy Change Total	\$ 78,174,343	\$ 336,789,207	\$ 258,614,864	\$ 258,614,864

Sources:

[A] Schedules 4.11 and 4.2

[B] Schedules 4.11 and 4.2

[C] Calculated

[D] Calculated

Notes:

(1) In total, Quality Assurance cost growth is \$145,856,514. Our analysis estimates that \$105,544,098 of this cost growth relates to Construction. (See Schedule 4.1 series)

CB&I AREVA MOX Services, LLC.
Quality Assurance (QA) Claim Cost Summary

Schedule 4.1

	Cost Amount
Overall QA Scope Change	\$ 145,856,514
QA Related to Process Units	\$ 25,654,194
QA Related to Construction Effort	105,544,098
QA Related to Hotel Load	14,658,222
Total	\$ 145,856,514

Sources:

Schedule 4.11

CB&I AREVA MOX Services, LLC.

Schedule 4.11

QA Scope Change By Category Through 2012 Rebaseline with Addendum

	[A]	[B]	[C]	[D]	[E] = A*B	[F] = A*C	[G] = A*D	[H] = E + F + G
	Cost Amount	% Process Unit Related	% Construction Effort Related	% Hotel Load	Amount Related to Process Units	Amount Related to Construction Effort	Amount Related to Hotel Load	Total
2007 Baseline	\$ 23,023,054	17.59%	72.36%	10.05%	\$ 4,049,445	\$ 16,659,849	\$ 2,313,760	\$ 23,023,054
2012 Rebaseline with Addendum	168,879,568	17.59%	72.36%	10.05%	29,703,639	122,203,946	16,971,983	168,879,568
Cost Growth	\$ 145,856,514				\$ 25,654,194	\$ 105,544,098	\$ 14,658,222	\$ 145,856,514

Sources:

[A] - [D] Schedule 4.12

[E] - [H] Calculated

CB&I AREVA MOX Services, LLC.
Categorization of Quality Assurance Cost Growth By Cost Account⁽¹⁾

		[A]	[B]	[C] = B - A	[D]	[E]	[F]	[G] = C*D	[H] = C*E	[I] = C*F	[J] = G + H + I
		2012						Cost Growth Allocation			
Cost Account	Cost Account Description	2007 Baseline	Rebaseline with Addendum	Cost Growth	% Process Unit Related	% Construction Effort Related	% Hotel Load	Process Unit Related	Construction Effort Related	Hotel Load	Total
1901.6020	QA Program Management & Administration	\$ 3,211,818	\$ 12,989,851	\$ 9,778,033	0%	0%	100%	\$ -	\$ -	\$ 9,778,033	\$ 9,778,033
1901.6021	Quality Engineering	4,758,444	24,010,181	19,251,737	33%	67%	0%	6,353,073	12,898,664	-	19,251,737
1901.6022	Audit & Surveillance	1,318,214	13,036,397	11,718,183	25%	75%	0%	2,929,546	8,788,637	-	11,718,183
1901.6023	Quality Control Projects	4,652,064	78,946,499	74,294,435	18%	83%	0%	13,001,526	61,292,909	-	74,294,435
1901.6024	QA & QC Assembly GS	1,716,727	4,392,446	2,675,719	85%	15%	0%	2,274,361	401,358	-	2,675,719
1901.6026	QA/QC Subcontractors	300,000	256,791	(43,209)	0%	100%	0%	-	(43,209)	-	(43,209)
1901.6027	Testing & Inspection QA/QC	3,776,738	22,121,449	18,344,711	0%	100%	0%	-	18,344,711	-	18,344,711
1902.6020	QA Program Management & Administration	-	1,809,790	1,809,790	0%	0%	100%	-	-	1,809,790	1,809,790
1902.6021	Quality Engineering	-	1,277,372	1,277,372	33%	67%	0%	421,533	855,839	-	1,277,372
1902.6022	Audit & Surveillance	-	1,270,862	1,270,862	25%	75%	0%	317,716	953,147	-	1,270,862
1902.6023	Quality Control Projects	-	2,036,800	2,036,800	18%	83%	0%	356,440	1,680,360	-	2,036,800
1902.6026	QA/QC Subcontractors	-	22,215	22,215	0%	100%	0%	-	22,215	-	22,215
1902.6027	Testing & Inspection QA/QC	-	349,467	349,467	0%	100%	0%	-	349,467	-	349,467
Subtotal QA Cost Accounts Identified in REAs ⁽²⁾		\$ 19,734,005	\$ 162,520,120	\$ 142,786,115				\$ 25,654,194	\$ 105,544,098	\$ 11,587,823	\$ 142,786,115
1901.6017	Human Performance Improvement Program	\$ -	\$ 162,906	\$ 162,906	0%	0%	100%	\$ -	\$ -	\$ 162,906	\$ 162,906
1901.6018	QA/QC - JLE/LTTA	-	-	-	0%	0%	100%	-	-	-	-
1901.6025	MOX Potential Back Charges	-	399	399	0%	0%	100%	-	-	399	399
1901.6028	Commercial Grade Dedication	-	54,273	54,273	0%	0%	100%	-	-	54,273	54,273
1901.6029	Regulatory Compliance	720,511	5,147,845	4,427,334	0%	0%	100%	-	-	4,427,334	4,427,334
1901.9003	Quality Engineering	1,353,049	-	(1,353,049)	0%	0%	100%	-	-	(1,353,049)	(1,353,049)
1901.9503	Quality Engineering	-	-	-	0%	0%	100%	-	-	-	-
1902.6017	Human Performance Improvement Program	-	10,204	10,204	0%	0%	100%	-	-	10,204	10,204
1902.6029	Regulatory Compliance	-	983,821	983,821	0%	0%	100%	-	-	983,821	983,821
1902.9503	Quality Engineering	1,215,489	-	(1,215,489)	0%	0%	100%	-	-	(1,215,489)	(1,215,489)
Other QA Cost Accounts		\$ 3,289,049	\$ 6,359,448	\$ 3,070,399				\$ -	\$ -	\$ 3,070,399	\$ 3,070,399
Total		\$ 23,023,054	\$ 168,879,568	\$ 145,856,514				\$ 25,654,194	\$ 105,544,098	\$ 14,658,222	\$ 145,856,514
% of Total							17.59%	72.36%	10.05%	100.00%	

Sources:

[A] May 2007 PRISM data adjusted for budget transfers occurring July 2007 through September 2012

[B] 2012 contract proposal value as stated in December 2012 PRISM data and adjusted for 2012 Rebaseline Addendums

[C] Calculated

[D], [E], [F] Cost accounts 6020, 6021, 6022, 6023, 6024, 6026 and 6027 percentage allocations provided by MOX Services QA personnel. All other cost accounts in this analysis are categorized as Hotel Load

[G] Calculated

[H] Calculated

[I] Calculated

[J] Calculated

Notes:

1) The categorization of QA cost growth to process units, construction effort and hotel load is based on applying percentage allocations developed by MOX Services QA personnel for each of the QA cost accounts. Although all of the QA accounts are classified as time related or hotel load within MOX Service's PRISM system, for purposes of quantification of impacts from NNSA changes, the Quality Assurance changes have been separated.

2) These QA cost accounts were identified as having cost growth related to changed scope within REAs 10-002, 11-003, and 11-005.

CB&I AREVA MOX Services, LLC.
Quality Assurance 2007 Baseline v. 2012 Rebaseline
FY 2006 - FY 2019

	[A]	[B]	[C] = B - A
Fiscal Year	2007 Baseline	2012 Rebaseline	Cost Growth
FY2006	\$ 12,639	\$ 13,461	\$ 822
FY2007	2,461,071	2,684,889	223,817
FY2008	2,760,172	6,034,676	3,274,504
FY2009	2,885,639	12,185,513	9,299,874
FY2010	2,966,022	16,051,904	13,085,881
FY2011	2,953,683	16,901,485	13,947,802
FY2012	2,567,914	21,504,311	18,936,398
FY2013	2,585,887	19,266,075	16,680,189
FY2014	2,372,615	20,091,135	17,718,520
FY2015	1,439,482	19,120,321	17,680,839
FY2016	17,930	16,519,614	16,501,684
FY2017	-	11,850,508	11,850,508
FY2018	-	5,877,243	5,877,243
FY2019	-	778,433	778,433
Total	\$ 23,023,054	\$ 168,879,568	\$ 145,856,514

Notes:

Quality Assurance cost and budget were moved to MA 19 (Quality Assurance) in FY2009 primarily from MA 06 (Project Management). This analysis time phases the QA from the 2007 Baseline (adjusted for budget transfers between July 2007 and September 2012) and 2012 Rebaseline based on original QA accounts included in the original May 2007 Baseline and 2012 Rebaseline.

CB&I AREVA MOX Services, LLC.
Construction Management Cost Growth by Cost Account

Schedule 4.2

		[A]	[B]	[C] = B - A
Cost Account	Cost Account Description	2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1504.8541	Supervision / Admin	\$ 21,437,033	\$ 107,636,857	\$ 86,199,824
1500.8501	Management / Admin	23,522,195	63,202,558	39,680,363
1500.8502	Project Controls	10,943,800	32,745,008	21,801,208
1505.8551	Supervision / Admin	(41,922)	3,461,412	3,503,334
1500.8506	Business	1,451,888	4,061,850	2,609,963
1501.8512	Temporary Assignments	20,153	1,802,546	1,782,393
1504.8512	Temporary Assignments	-	1,858	1,858
1501.8519	Project Controls	-	-	-
1502.8521	Supervision / Admin	-	-	-
1502.8522	Project Controls	-	-	-
1502.8523	Quality Assurance	-	-	-
1502.8524	ES&H	-	-	-
1503.8531	Supervision / Admin	-	-	-
1503.8532	Project Controls	-	-	-
1503.8534	ES&H	-	-	-
1504.8542	Work Control Group	-	-	-
1505.8552	Project Controls	-	-	-
1505.8554	ES&H	-	-	-
1501.8511	Business Travel	711,965	494,312	(217,653)
1500.8503	Quality Assurance	749,625	484,283	(265,342)
1500.8504	ES&H	2,719,758	694,576	(2,025,182)
Total Construction Management		\$ 61,514,495	\$ 214,585,261	\$ 153,070,766

Sources:

[A] and [B] Schedule 6.11

[C] Calculated

CB&I AREVA MOX Services, LLC.
Construction Management Labor Cost Growth by Fiscal Year⁽³⁾
FY 2006 - FY 2017

	[A]	[B]	[C] = B-A
Fiscal Year	2007 Baseline as Provided ⁽¹⁾	2012 Rebaseline with Addendum ⁽²⁾	Labor Growth
FY 2006	\$ 158,897	\$ 158,897	\$ -
FY 2007	7,655,631	6,663,114	(992,517)
FY 2008	9,433,823	9,670,870	237,047
FY 2009	11,350,375	10,921,746	(428,629)
FY 2010	11,440,132	12,075,918	635,785
FY 2011	11,005,133	13,299,039	2,293,906
FY 2012	6,985,889	21,523,947	14,538,058
FY 2013	1,436,871	25,325,028	23,888,156
FY 2014	216,065	28,873,600	28,657,535
FY 2015	-	28,551,082	28,551,082
FY 2016	-	30,957,657	30,957,657
FY 2017	-	21,225,716	21,225,716
Total	\$ 59,682,817	\$ 209,246,613	\$ 149,563,796

Sources:

[A] May 2007 PRISM Data - Labor Costs

[B] 2012 contract proposal value as stated in December 2012 PRISM data and adjusted for 2012 Rebaseline Addendums - Labor Costs

[C] Calculated

Notes:

(1) This does not include adjustments for budget transfers between July 2007 and September 2012 or the 2012 Rebaseline Addendum costs.

(2) 2012 Rebaseline reflects actuals incurred through the end of FY 2012. FY 2013 and later represents the estimated costs included in the 2012 Rebaseline.

(3) Construction Management Labor Cost identified by cost elements Accrued Labor (AL), Labor (L), Accrued Craft Labor (AY), and Craft Labor (Y).

V. THE UNKNOWN COMPLEXITY OF THE PROJECT AT THE TIME OF ESTIMATING APPLIES TO ALL OUT-OF-SCOPE COSTS INCURRED THROUGH APRIL 2013 ON WHICH MOX SERVICES HERE CLAIMS FEE

The foregoing “Process Unit” and “Change in Method of Performance” sections set forth NNSA’s responsibility to pay fee on MOX Services’ increased MFFF costs as they relate to the 2007 Baseline’s under-informed estimates regarding how much the building and its equipment would cost. At root, the combined \$1.625 billion in estimated increased costs (\$815 million incurred through April 2013) discussed in these sections was due to government-caused information deficits supporting the 2007 Baseline estimates that necessitated an overreliance on untested assumptions. As for the equipment, without pilot procurements, the process unit estimates assumed the accuracy of untested bottom-up extrapolations of labor and materials costs. And as for building the facility, the construction strategy assumed that multiple capable contractors would bid on large construction packages on a fixed-price basis, and that such competition would drive down costs and minimize the chance of cost increases.

The MFFF Project’s third major cost area involves the systems necessary to integrate the process equipment with the building. In addition to the costs of the facility and of the equipment the structure would house, the Project required significant investment to prepare the facility to provide utilities to the equipment and to install the process units. Among other things, these costs included the purchase of commodities, such as electrical, HVAC, piping for various gases and liquids, fire prevention, controls and other systems, and the engineering and craft labor necessary to design and carry out the process unit installation. As with the estimates for the facility and process unit costs, NNSA caused the 2007 Baseline estimates for these systems-related costs to be based on deficient information.

Specifically, 2007 Baseline cost and schedule estimates were based on immature systems designs that failed to fully appreciate the great complexity of the Project. And, indeed, the data deficits explained here had elements emanating from external political developments (like, especially, the process unit estimating situation) and failed assumptions of the feasibility of fixed-priced subcontracting (like, especially, the change in method of construction performance).

Not only were the three main areas of increased costs interconnected. The causal factors for them also overlapped. Thus, the rubric of this “systems” section also could apply to the process unit estimates (which proved much more difficult to design and build under NQA-1 strictures than bargained for in 2007), with political developments a major contributing factor. And, just as the “estimate first, design later” problem described in this section entailed the rushed, unfounded assumption that the systems design, fabrication and installation could be accomplished with fixed-price subcontracts, the acquisition strategy assumed, with no tangible support or precedent, that the facility could be built efficiently by having firms compete for the award of large, risky fixed-priced contracts.

In short, the concept described here particularly with respect to systems – that when NNSA directed MOX Services to submit estimates in support of the 2007 Baseline the parties had only a cloudy notion of the tremendously complex endeavor before them – was endemic to the Project as a whole. As such, the legal theory on which MOX Services here claims entitlement to fee on the \$439,643,850 increase in systems costs incurred through April 2013 applies as well to the entire \$1,058,110,476 of out-of-scope costs incurred through April 2013 on which fee is due.

A. MOX Services Is Entitled To Fee On Out-Of-Scope MFFF Systems Costs Incurred Through April 2013

As of the 2012 Rebaseline with Addendum, MOX Services estimated that the Project would experience nearly \$1.2 billion in construction related cost growth over the 2007 Baseline estimates, including \$357 million in additional bulk commodity, mechanical equipment, and materials purchasing costs; \$785 million in associated increased installation costs²⁸⁶; and \$58 million in associated increased Title III Engineering costs. Of these amounts approximately \$440 million had been incurred through April 2013. The following table presents these amounts, and the incurred portions through April 2013, at the level of Management Area 17 for selected Construction cost accounts,²⁸⁷ and for Management Area 10 for discrete Title III construction engineering.

²⁸⁶ As used here, “installation costs” refers to cost elements such as craft labor, supervision labor, equipment costs and miscellaneous materials not captured in “materials” cost accounts.

²⁸⁷ Construction cost growth captured here does not include cost growth in MA 17 related to process units, which is claimed separately in the “Process Equipment Changes” Section, nor does it include increased construction management and quality assurance costs due to the change in performance strategy (“Change in Method” Section), nor additional engineering costs under the Base Contract.

Chart V.1, Summary of MFFF Systems Construction Change^{288, 289}

	[A]	[B]	[C] = B-A	[D]
Claim Category	2007 Baseline	2012 Rebaseline with Addendum	Cost Growth	Incurred Claim Growth Through April 2013
Installation	\$ 817,738,444	\$ 1,602,357,424	\$ 784,618,980	\$ 221,226,150
Materials	244,861,751	601,793,073	356,931,323	160,121,159
Title III Engineering	32,948,661	91,265,151	58,316,491	58,296,541
Total	\$ 1,095,548,855	\$ 2,295,415,649	\$ 1,199,866,793	\$ 439,643,850

MOX Services is entitled to fee on the entire \$440 million of incurred cost growth under the seminal case of *H.K. Ferguson Company*, ASBCA No. 2826, Mar. 29, 1957, 57-1 BCA ¶1293.²⁹⁰ *Ferguson* stands for the proposition that when the scope of work on a cost-type contract is stated in very general terms, it is appropriate to look to the contract's negotiated estimated cost to determine what work was contemplated by the parties. The *Ferguson* methodology is especially apt where, as here, extensive design evolution after the estimated costs are set causes the work the contractor actually performs to materially exceed the amount and character of the work contemplated by the contract.²⁹¹ *Id.* at 22.

The *Ferguson* Board observed that for budgetary and Antideficiency Act purposes "[t]here is a close relation between the work required by the contract and the estimated cost." *Id.* at 21. This is so because to "say that the scope of the contract includes a substantial

²⁸⁸ Column A is taken from May 2007 PRISM data, adjusted for budget transfers between July 2007 and September 2012. Column B is taken from December 2012 PRISM data.

²⁸⁹ Detailed schedules of the amounts established in this section of the Claim are found appended to this Section as Schedule 1.23 and Schedule 5 series, "MFFF Construction Change."

²⁹⁰ Again, the unknown complexity of the Project at the time of contracting also serves as an alternative basis for MOX Services' entitlement to fee on the entire \$1.1 billion in increased costs over the 2007 Baseline that was incurred through April 2013.

²⁹¹ It is appropriate to look to the 2007 Baseline's estimated negotiated cost for Project construction (MA 17), \$1.06 billion, to determine the work the parties contemplated as within Option 1. The difference between the 2007 Baseline and the 2012 Rebaseline with Addendum estimates accurately reflects the difference between the parties' contemplation of the work included in Option 1 and the amount and character of the work MOX Services actually performed. *See Ferguson*, 57-1 BCA ¶1293 at 22.

amount of work that was not taken into account in determining the estimated cost is to say that the contract was entered into in violation of law.” *Id.* Given the “legal and practical requirement” of a nexus between the work contemplated and the estimated costs *Id.* at 22), the Board held that the contractor was entitled to additional fee under the changes clause because the evolving designs constituted changes in functional requirements, or “scope” in changes clause parlance. *Id.* at 21.

Applying *Ferguson’s* time-tested construct here,²⁹² it is far from enough to say that the changes clause is not implicated because the original purpose of the MFFF has not changed. Although the purpose of the Project has always been to transform Plutonium 239 into mixed oxide fuel to be irradiated in nuclear reactors, for Option 1 DOE directed MOX Services to estimate first and design later. The result has been, among other things, substantial increases in MFFF systems construction costs over the estimates supporting the 2007 Baseline.

B. The MFFF Situation Is Nearly Identical To That Explored in *H.K. Ferguson Company*

Ferguson addressed a request for equitable adjustment in a situation that is astonishingly similar to the one presented here.²⁹³ *Ferguson* concerned the contractor’s entitlement to fee on a design-build contract for a first-of-a-kind facility involving extremely dangerous materials that required many complex safety systems, and where the designs were evolving concurrently with construction. On behalf of the Chemical Corps, the Corps of Engineers procured the cost-plus-fixed-fee contract under which *Ferguson* would design and engineer, and serve as the construction manager for a facility in which bacterial agents for military use would be developed and manufactured. *Id.* at 1. In addition to designing and building the facility, the contractor was responsible for procuring and installing the process equipment that was being designed by the Chemical Corps. *Id.* at 3-4.

At the time of contracting the Chemical Corps either had not completed the process equipment designs or the designs were classified. In either case, the designs were unknown

²⁹² Although issued over 50 years ago, *Ferguson* has never been overruled, and the case is favorably discussed in its own subsection of Prof. Ralph Nash’s authoritative *Government Contract Changes* treatise. See Ralph C. Nash & Steven W. Feldman, *Government Contract Changes* §8.4 (“Cost-Reimbursement Contracts: Defining a ‘Change’”) (Thompson Reuters June 2014).

²⁹³ The similarities extend all the way to underestimated costs of constructing gloveboxes, or, in *Ferguson’s* terms, “reyneir chambers,” to the government’s changing specifications. *Ferguson*, 57-1 BCA ¶1293 at 10-11. The project in *Ferguson* required the construction of 300 of these “highly complex” reyneir chambers, each taking at least five months to make, through which scientists could perform bacterial warfare experiments.

to the Corps of Engineers and Ferguson during contract negotiations.²⁹⁴ *Id.* at 5. The Chemical Corps' urgent need for the facility required that construction proceed concurrently with design. *Id.* at 6. It was only during contract performance that the facility's true complexity came to light. *Id.* at 4. Ferguson's fee was negotiated based on the estimated costs and schedule of the facility (*id.* at 5), and the dispute over Ferguson's fee arose when it became apparent that the facility would cost twice as much, and take three times as long, as the parties initially anticipated. *Id.* at 1.

In these circumstances, the *Ferguson* panel rejected the government's contention that because the general description of the facility and its purposes had not changed, there had been no fee-bearing changes under the changes clause. Rather, the Board held that Ferguson was entitled to additional fee on the "increased cost resulting from changes increasing the amount and character of the work." *Id.* at 25.

C. Like The Project In *Ferguson*, The MFFF Features Unprecedented And Evolving Designs

Ferguson noted that although the mission of the project did not change, "major changes in cost" were incurred due to the "unprecedented features" of the facility and due to the project's execution strategy, where "construction [was] concurrent with design and unpredictable problems...developed as the technical requirements were adapted to the physical conditions and which were not obvious to those responsible for the original cost estimates." *Id.* at 6. Referring to the classified nature of much of the technology deployed on the project, the Board noted that the deficient cost estimates were "due to ignorance of and the secrecy clothing the technical aspects of the basic process involved." *Id.*

Likewise, here, the "unprecedented features" of the Project are evident. For the first time ever, the Project combines into a single facility two separate and highly complex processes: (1) aqueous polishing, to remove impurities from radioactive material, and (2) MOX fuel fabrication, to mix plutonium with uranium oxide to form MOX fuel pellets and combine them into nuclear reactor fuel assemblies. Moreover, no other facility in the world conducts these processes on weapons-grade plutonium, much less does any other facility do so within the strictures of the governing NRC regulations.²⁹⁵

Nor can it be denied that major design work has proceeded concurrently with the construction of the MFFF structure and the procurement of process equipment. The Project

²⁹⁴ Following contract negotiations Ferguson's employees received security clearances that allowed them access to the process equipment designs as they were completed. *Ferguson*, 57-1 BCA ¶1293 at 5.

²⁹⁵ It is not a meaningful distinction of *Ferguson* to observe that whereas *Ferguson* involved the government withholding classified design information from the contractor, the MFFF contract was structured as design-build. Both situations share the critical fact that the government caused the cost estimates to be based on incomplete designs.

Execution Plan, which is part of the Option 1 contract and was contemporaneous with the 2007 Baseline, stated that the target date to “Complete [Manufacturing Design Group] Design” was November 17, 2008, 19 months later,²⁹⁶ and to “Complete Facility Design” was February 29, 2010, almost three years after DOE’s Critical Decision 2/3 approval.²⁹⁷

The Root Cause Analysis repeatedly emphasized that the cost increases and schedule delays were caused not by failures on the part of MOX Services, but by the decision to approve the performance baseline and the start of construction when the designs’ immaturity could not support accurate estimates. Noting the “inherent risks in proceeding with nuclear construction at the early stages of design completion,” the Root Cause Analysis remarked that the estimates supporting the CD-2/3 approval were over a year old by that point, and “were based on a level of design that would only support a conceptual level estimate.”²⁹⁸ Analyzing the history of the Project up to May 2014, the RCA calculated that the design progress was “approximately 35 to 40 percent at the time that the estimate was prepared and approximately 45 to 50 percent at the time that construction started.”²⁹⁹

D. Like The Project In *Ferguson*, The Government Was Responsible For The Option 1 Underestimates

Having established that the Project set the performance baseline and started construction before the parties had a solid understanding of the resources and time that would be required to build the facility, the question becomes “Why?” or, more specifically, “Who was responsible for the systematic underestimates?”

Here, as in *Ferguson*, the responsibility lies squarely with the government, thus MOX Services is entitled to fee on the additional costs. Due to external political factors, DOE directed MOX Services to estimate the Option 1 costs before the designs were sufficiently mature to support accurate estimates.³⁰⁰

²⁹⁶ This process unit design work did not even include vendors’ fabrication drawing work, which would come later.

²⁹⁷ PEP, Exhibit 13 at 25.

²⁹⁸ RCA, Exhibit 18 at 2-11.

²⁹⁹ *Id.*

³⁰⁰ MOX Services does not blame DOE for directing MOX Services to prepare and submit Option 1 estimates before there was a solid design basis for them. Nor does MOX Services accuse DOE of acting in bad faith or placing MOX Services under duress. Rather, MOX Services acknowledges that DOE was in a very difficult political bind, and likely had its hand forced by other entities. Even taking this as true, however, does not absolve DOE from liability to pay fee on the resulting cost increases over the insufficient cost estimates. In this regard, DOE is in the same posture as the Corps of Engineers was in *Ferguson*. There, the

1. 2002: South Carolina Resists Accepting Plutonium 239 at the Savannah River Site

The relationship between DOE and the State of South Carolina regarding the State's acceptance of weapons-grade plutonium has long been contentious, and ultimately, this dynamic drove DOE to rush MOX Services to create and submit Option 1 estimates. South Carolina allowed DOE to temporarily store Plutonium 239 at the Savannah River Site only on the condition that DOE have a plan for its disposition, such as processing it into MOX fuel at the Site.

Although DOE and MOX Services entered into the base contract in 1999, it was not until January 23, 2002 that DOE supposedly committed to MOX as its disposition strategy under the PMDA.³⁰¹ Soon thereafter, on April 11, 2002, DOE announced that it would begin shipping weapons-grade plutonium to the Savannah River Site to be stored until the MFFF was able to process it.³⁰² South Carolina wanted to ensure, through a court-recognized consent decree, that DOE would meet its stated time frame for either processing this dangerous material into MOX fuel or shipping it back out of the State. Essentially, South Carolina would agree to accept the Plutonium 239 in exchange for the economic benefit of having a multi-billion dollar facility built and operating in its State.³⁰³ DOE rejected this proposal.³⁰⁴

A week after DOE's announcement that it would dispose of the plutonium using the MOX process, however, DOE issued an official "Record of Decision" that stated plutonium would be shipped to the Savannah River Site, but that no final decision regarding whether to implement the MOX fuel disposition alternative had been made. *See* 67 Fed. Reg. 19432, 19432 (April 19, 2002). Feeling deceived by DOE's earlier announcement that the MOX solution was a certainty, South Carolina took steps to block the plutonium shipments. First, South Carolina governor Jim Hodges ordered multiple state law enforcement agencies to conduct a joint exercise on April 22, 2002 to prepare to blockade the federal shipments of

Corps of Engineers was the contracting agency liable to pay Ferguson additional fee, but the Chemical Corps was the agency that caused construction to begin before the designs were sufficiently developed. So too here, DOE must pay additional fee even if political circumstances beyond its control forced DOE to direct MOX Services to submit estimates before the designs were ready.

³⁰¹ DOE Jan 23, 2002 Press Release ("Exhibit 89").

³⁰² DOE Timeline, April 15, 2002 ("Exhibit 90").

³⁰³ *Id.* at April 11-12, 2002.

³⁰⁴ *Id.*

plutonium into the state.³⁰⁵ Second, on May 1, 2002, South Carolina filed suit in federal district court to block the shipments. *See Hodges v. Abraham*, 300 F.3d 432, 442 (4th Cir. Aug. 6, 2002).

While South Carolina's court challenge was denied (*Id.* at 449), it spurred Congress to pressure DOE to make good on its promise to move forward with the MFFF. On May 1, 2002, the South Carolina congressional delegation introduced legislation that would require DOE to pay South Carolina \$1,000,000 for every day beyond January 1, 2017, that the MOX facility was late in processing certain targeted amounts of plutonium into MOX fuel.³⁰⁶ In recognition of the bargain between South Carolina and the federal government, the statute termed these payments "Economic and impact assistance." 50 U.S.C. §2566(d).

2. 2003-2005: Inability of United States and Russia to Agree to a Liability Protocol and DOE's Response

Having reached a détente with South Carolina, DOE quickly found itself in a difficult political position. In July 2003, the liability protocol under which U.S. companies had provided technical support to Russia's plutonium disposition program expired.³⁰⁷ The countries were unable to reach agreement on a new protocol.³⁰⁸ Due to the PMDA's requirement that the countries' disposition programs proceed in rough parallel, in February 2004 the delay in Russia's progress caused DOE to announce a one-year delay in the planned start of U.S. MFFF construction, from May 2004 to May 2005.³⁰⁹

As the delay in agreeing to a new liability dragged on, the political position of the State of South Carolina became stronger. The State could credibly point out that in 2002 it had fought to avoid the present scenario where it would be left holding Plutonium 239 for an indefinite period with no prospect of the U.S. MFFF being built. The "Economic and impact assistance" provision of 50 U.S.C. §2566 loomed, and, as the liability protocol stalemate wore on, the political ability of South Carolina's congressional delegation to fast-track MFFF construction grew.

In this interim, with the future of the MFFF unknown, DOE moved to focus MOX Services' efforts exclusively on producing a licensable design and to scale back MOX

³⁰⁵ Savannah Morning News, "Plutonium Blockade Exercises Scheduled for Monday," (April 21, 2002) ("Exhibit 91").

³⁰⁶ DOE Timeline, May 2, 2002; 50 U.S.C. §2566(c), (d) (enacted December 2, 2002), Exhibit 90.

³⁰⁷ Sen. Domenici Press Release, July 19, 2005 ("Exhibit 92").

³⁰⁸ *Id.*

³⁰⁹ *Id.*

Services' work. While completing a design the NRC would license may have been reasonable in the circumstances, DOE's channeling of MOX Services' design work in this way hampered its ability to produce accurate cost and schedule estimates.

- In 2003, DOE began to refuse MOX Services' requests to conduct procurements for fear that Russia would believe that the United States was willing to de-link its commitment to reducing its plutonium stockpile from Russia's.³¹⁰ This restriction persisted until MOX Services submitted its Option 1 Proposal, and it hampered MOX Services' ability to access vendor information to support its estimating activity.³¹¹
- In April 2004, DOE directed MOX Services to plan for a delay in the start of construction and to scale back design work.³¹² Later, in July 2004, DOE further directed MOX Services to "produc[e] a licensable design by the end of 2004," and to "terminat[e] all non-essential work" not focused on that goal.³¹³
- DOE began to limit funding to the MFFF, such that in July 2004 MOX Services reported that it had incurred more expenses than there were funds allocated to the Project.³¹⁴
- In July 2004, DOE instituted a hiring freeze on MOX Services, including disallowing MOX Services to backfill vacant positions.³¹⁵
- In January 2005, DOE notified MOX Services that it had slashed MOX Services' operating funds for FY 2005 from a projected \$77.7 million to \$48 million. DOE then set priorities for the year that included delaying several

³¹⁰ See Exhibit 29, Letter DCS-DOE-001103 from T.E. Touchstone, Deputy Project Manager, Duke Cogema Stone & Webster to Patrick Rhoads, MOX Fuel Program Manager, DOE (Sept. 18, 2003); July 2004 MOX Fuel Project Status Report, p. 7 of 181 ("Exhibit 93").

³¹¹ See, e.g., July 2004 MOX Fuel Project Status Report, Exhibit 93, p. 7 of 181.

³¹² April 2004 MOX Fuel Project Report, p. 10 ("Exhibit 94").

³¹³ July 22, 2004 PowerPoint, p. 26 ("Exhibit 95").

³¹⁴ See Letter DCS-DOE-001741 from Naresh Jain, Director of Procurement, DCS, to David Hess, Contracting Officer, DOE (July 22, 2004) ("Exhibit 96").

³¹⁵ See Letter DOE-DCS-000810 from James Bieschke, Director Special Programs Division, DOE to L.R. Barnes, President and COO, Duke Cogema Stone & Webster, LLC (July 2, 2004) ("Exhibit 97").

activities until FY 2006, and focusing FY 2005 operating expenses on licensing activities.³¹⁶

All of the foregoing DOE-imposed restrictions on MOX Services diverted MOX Services away from design work necessary to prepare accurate estimates.

3. July 2005 – March 2006: The U.S. and Russia Agree to a Liability Protocol, and DOE Pressures MOX Services to Submit its Option 1 Proposal

On July 19, 2005, after well over two years' delay, the United States and Russia agreed to a liability protocol.³¹⁷ This was more than three years after the spring 2002 stand-off between the State of South Carolina and the federal government over the State's receipt of Plutonium 239, and South Carolina was eager finally to receive its benefit of the bargain – the beginning of MFFF construction.

The day after the liability protocol was reached, DOE notified MOX Services that it would exercise Option 1 of the MFFF contract.³¹⁸ After hamstringing MOX Services' estimating efforts until the liability protocol was settled, in its notification letter, DOE directed MOX Services to submit a technical and cost proposal for Option 1 by November 1, 2005.

In reply, MOX Services informed DOE that it would not be able to submit an Option 1 proposal until January 2006, a supposed delay that NNSA found "not acceptable."³¹⁹ NNSA again instructed MOX Services to submit its proposal by November 1, 2005, and also to provide NNSA with weekly updates on its progress.³²⁰ In doing so, NNSA made clear that external budgetary pressures drove its dictated schedule, and not the best interests of the Project. NNSA explained that among its reasons for demanding the Option 1 proposal so soon was to remain "consistent with ... the President's fiscal year 2006 budget request to Congress."³²¹ NNSA warned MOX Services that meeting

³¹⁶ See Letter DOE-DCS-000891 from James Bieschke, Director Special Programs Division, DOE to L.R. Barnes, President and COO, Duke Cogema Stone & Webster, LLC (Jan. 7, 2005) ("Exhibit 98").

³¹⁷ Sen. Domenici Press Release, Exhibit 92. In March 2005, MOX Services had received approval from the NRC to begin construction.

³¹⁸ See Exercise of Unexercised Segments (Remainder) of Option 1, Exhibit 69.

³¹⁹ See Letter DOE-DCS-001040 from Martin Newdorf, Federal Project Director, NNSA, to L.R. Barnes, President and COO, Duke Cogema Stone & Webster, LLC (Aug. 1, 2005) ("Exhibit 99").

³²⁰ *Id.*

³²¹ *Id.*

the November 1, 2005 deadline was necessary to “efforts to maintain funding for the MOX FFF project.”³²²

Three days later, MOX Services provided a plan to support structural construction start by May 2006 without shortcutting the estimating process.³²³ MOX Services listed several reasons why preparing reasonably accurate cost estimates by the proposal date was unrealistic under the circumstances. These reasons included that changes in funding profiles had delayed its ability to produce the “extremely important...highest confidence cost estimates”; that MOX Services needed more time to add detail and content to preliminary estimates in order to support DOE’s and DCAA’s “timely review and approval of cost proposals” and to incorporate the greater amount of available design information; and that “[d]ue to DOE restrictions against vendor interactions, the existing cost estimates reflect little vendor pricing.”³²⁴ MOX Services concluded:

[T]he work required to develop high confidence cost estimates in a form suitable for baselining the project and for submitting a compliant cost proposal added to the work anticipated to resource-load and manipulate/iterate the integrated cost project schedule to meet the annual funding constraints cannot be accomplished by 01 November 2005.³²⁵

DOE and MOX Services exchanged a second set of contentious letters on the scheduling of MOX Services’ Option 1 estimates on August 12 and August 18, 2005, respectively. DOE called MOX Services’ inability to submit an Option 1 proposal on DOE’s schedule “non-responsive” and “not acceptable,” and the Agency repeated its direction to MOX Services to provide an Option 1 proposal by November 1, 2005.³²⁶ Again, DOE explained that the budgeting cycle drove the agency to rush MOX Services’ Option 1 proposal, and again DOE threatened that its unilaterally imposed schedule was needed “to maintain funding for the [MFFF].”³²⁷ MOX Services responded six days later, and again explained why it was not possible to submit an accurate and sufficiently detailed Option 1

³²² *Id.*

³²³ See Letter DCS-DOE-002189 from L.R. Barnes, President and COO, Duke Cogema Stone & Webster, LLC to Martin Newdorf, Federal Project Director, NNSA (Aug. 4, 2005) (“Exhibit 100”).

³²⁴ *Id.*

³²⁵ *Id.*

³²⁶ See Letter DOE-DCS-001045 from John Motz, Contracting Officer, DOE to L.R. Barnes, President and COO, Duke Cogema Stone & Webster, LLC (Aug. 12, 2005) (“Exhibit 101”).

³²⁷ *Id.*

proposal on DOE's schedule.³²⁸ Again requesting the funding profile it was to assume for estimating purposes, MOX Services noted the tremendous complexity inherent in scheduling multiple years of many functional areas within a given funding profile, where the integrated Project schedule contained 26,000 distinct activities.³²⁹

With the process of contracting for the construction of the MFFF unresolved, the State of South Carolina and the South Carolina congressional delegation kept the pressure on DOE to move the Project into the construction phase, whether or not MOX Services had sufficient data to support Option 1 cost estimates. On September 21, 2005, Aiken County, South Carolina filed suit in federal court alleging that the Department of Energy had not met its obligations under the 2002 legislation that stemmed from South Carolina's threatened blockade against the DOE transport of Plutonium 239 to the Savannah River Site.³³⁰ Among Aiken County's specific complaints was that DOE had failed timely to submit a reviewed construction and operations schedule for the MFFF following the resolution of the Russian liability protocol issue.

For its part, on October 14, 2005, the entire South Carolina congressional delegation held a groundbreaking ceremony for the MFFF at the Savannah River Site.³³¹ At the ceremony, Representative J. Gresham Barrett made clear that the delegation would continue to press DOE to uphold its promise to build the MFFF, and not just store Plutonium 239 at the Savannah River Site indefinitely. Stating that "today we begin to see concrete evidence that new missions are coming to the site," Rep. Barrett promised that "the entire delegation will continue to work together to ensure our state never becomes a dumping ground."³³² The DOE joined in the sentiment. At the groundbreaking, Rep. Barrett read from a letter sent to him the previous day by Energy Secretary Sam Bodman. The excerpt stated: "Resolving the liability issue was an important achievement, and the Administration remains strongly committed to moving forward with construction of the MOX facility in South Carolina."³³³

The South Carolina delegation was forceful in imploring DOE to start MFFF construction. In a hearing on February 16, 2006, South Carolina Senator Lindsey Graham

³²⁸ See Letter DCS-DOE-002205 from L.R. Barnes, President and COO, Duke Cogema Stone & Webster, LLC to John Motz, Contracting Officer, DOE (Aug. 18, 2005) ("Exhibit 102").

³²⁹ *Id.*

³³⁰ See Complaint in *Aiken County v. Bodman et al.*, 1:05-cv-02737-RBH (Dist. Of South Carolina, Sept. 21, 2005) ("Exhibit 103").

³³¹ October 14, 2005, Rep. Barrett Press Release ("Exhibit 104").

³³² *Id.*

³³³ *Id.*

pressed Secretary Bodman to start Project construction. Sen. Graham stated: “[M]y hope is that [soon] ... we can assure people in South Carolina that the money [for the Project] will be there, that we will get the program up and running, then the delays, we’re about three years behind, that we’re committed to making it happen.” Secretary Bodman responded: “All of that – we are committed absolutely to making it happen.”

In a later hearing on March 6, 2006, Sen. Graham strongly urged NNSA Director Linton Brooks to break ground on the Project. Noting that his state had “stepped up to the plate again and we took plutonium that we didn’t generate,” Sen. Graham asked Mr. Brooks for “reassure[ance] ... that we’re going to get on with this, South Carolina is not going to get stuck with this plutonium... .” Mr. Brooks replied: “Yes, sir. Senator, we’re going to break ground and begin construction on the MOX Fuel Fabrication Facility later this year, sometime in the early fall.”

Shortly thereafter, Sen. Graham issued a press release announcing that 320 new employees would be hired by the end of 2006 to excavate the MOX site and pour the concrete foundation.³³⁴

4. NNSA Required MOX Services To Submit Its Option 1 Proposal Before The Designs Were Sufficiently Complete

In its letters to NNSA on August 4 and 18, 2005, MOX Services repeatedly explained that its schedule and cost estimates for Option 1 would be determined in significant measure by the funding profile on which MOX Services’ planning would be based. In answer to MOX Services’ appeals for this information, on September 8, 2005, NNSA provided MOX Services with a funding profile to use in developing the detailed cost and schedule baseline for the MFFF.³³⁵ That funding profile replaced one NNSA had provided in June 2005.³³⁶ The new profile called for MOX Services to prepare its estimates assuming Total Project Cost funding of \$388,565,000 for fiscal year 2006, which was then only three weeks away.

Ten weeks later, on November 21, 2005, in the midst of MOX Services’ push to develop Option 1 estimates, DOE changed the FY 2006 funding profile once again, lowering

³³⁴ See Sen. Lindsey Graham, Press Release, “500 Jobs Coming to Savannah River Site” (May 1, 2006 (“Exhibit 105”).

³³⁵ See Letter DOE-DCS-001075 from Martin Newdorf, Federal Project Director, NNSA to L.R. Barnes, President and COO, Duke Cogema Stone & Webster, LLC (Sept. 8, 2005) (“Exhibit 106”).

³³⁶ *Id.*; see also Letter DOE-DCS-001007 from Martin Newdorf, Federal Project Director, NNSA to L.R. Barnes, President and COO, Duke Cogema Stone & Webster, LLC (June 29, 2005) (“Exhibit 107”).

it by nearly one-third, to \$242,800,000.³³⁷ In light of MOX Services' repeated appeals for DOE to provide a funding profile on which it could rely, these great changes in funding assumptions injected significant turmoil and uncertainty into the estimating process.

On March 15, 2006, MOX Services submitted its Option 1 proposal.³³⁸ This was based in significant part on documentation to support CD-2/3, including scope, cost, and schedule information, that MOX Services had submitted a month earlier.³³⁹ At the time of the proposal, NNSA was well aware that the MFFF designs were not sufficiently complete to support accurate cost estimates.³⁴⁰

On November 10, 2005, NNSA required MOX Services to begin calculating and reporting its cumulative percentage complete for Option 1.³⁴¹ This "Joule Performance Metric" weighted design (20%), construction (65%) and startup (15%). MOX Services reported its February 2006 Joule Metric to be 14.8%, 14.6% of which represented design completion.³⁴² Thus, overall, MOX Services was reporting that the MFFF design was 73% complete ($14.6\%/20\% = 73\%$). And, indeed, in the Option 1 proposal, MOX Services estimated design completion percentages that were even lower than those contained in the February 2006 Report. Whereas the February Report stated that the cumulative progress percentages were 87.2% for MFFF engineering work and 54.5% for equipment design work,³⁴³ the Option 1 proposal estimated these figures at 85% and 50%, respectively.³⁴⁴ Overall, then, the Option 1 proposal estimated design completion to be no more than 70%.³⁴⁵

³³⁷ See Letter DOE-DCS-001119 from Martin Newdorf, Federal Project Director, NNSA to L.R. Barnes, President and COO, Duke Cogema Stone & Webster, LLC (Nov. 21, 2005) ("Exhibit 108").

³³⁸ See Letter DCS-DOE-002464 from David Stinson, President and Project Manager, Duke Cogema Stone & Webster, LLC, to Jim Bieschke, Contracting Officer, DOE (Mar. 15, 2006) ("Exhibit 109").

³³⁹ See Letter DCS-DOE-002429 from David Stinson, President, Duke Cogema Stone & Webster, LLC, to Martin Newdorf, Federal Project Director, NNSA (Feb. 16, 2006) ("Exhibit 110").

³⁴⁰ For the purpose of forming well-grounded and accurate estimates, the sophistication and experience of the companies that comprise MOX Services, though tremendously valuable to a project of the MFFF's complexity, is no substitute for reasonably complete designs.

³⁴¹ See Letter DOE-DCS-001110 from Martin Newdorf, Federal Project Director, NNSA to L.R. Barnes, President, Duke Cogema Stone & Webster, LLC (Nov. 10, 2005) ("Exhibit 111").

³⁴² See February 2006 MOX Fuel Project Status Report, at p. 2 ("Exhibit 112"). This Report stated that the equipment design work was 54.5% complete as of the end of February.

³⁴³ *Id.*

Importantly, NNSA knew that MOX Services could not have prepared accurate Option 1 estimates for MFFF construction with such incomplete designs, yet it pressed for them anyway.³⁴⁶ The DOE-commissioned External Independent Review of CD 2/3 conducted shortly after MOX Services submitted its Option 1 proposal warned that the 85% Design Review required under DOE Manual 413.3-1 was performed only on the CP-20 structural construction package.³⁴⁷

The Manual, at Chapter 6.7, requires that all design and engineering be “essentially complete” before beginning implementation and procurement activities. Yet, as of July 2006, NNSA’s 85% Design Reviews of major Construction Packages were scheduled to be conducted months or years later.³⁴⁸ And, in most cases these 85% Design Reviews were to be followed by their own External Independent Reviews.³⁴⁹ These deficiencies, which were emphasized in the 2014 Root Cause Analysis,³⁵⁰ were highlighted to NNSA Administrator Linton Brooks in a July 2006 memorandum from his Associate Administrator for Infrastructure and Environment. There, Administrator Brooks was warned that, among other

³⁴⁴ Option 1 Proposal, Exhibit 35 at 1-3.

³⁴⁵ Another aspect of the estimates bears mentioning here. In many cases, the estimates assumed that the craft work would be subcontracted on a fixed price basis to vendors who would design the commodity installation, as well as the installation. *See, e.g.*, Exhibit 35, Utility Equipment & Piping Element Definition (stating that the fixed priced subcontractor would design and install various equipment, pipes, valves, etc.); Exhibit 35, Fire Protection Element Definition (stating that the “Fire Protection” subcontractor would design and install all fire protection systems). And, as stated repeatedly in the Option 1 proposal documents and related correspondence (*see, e.g.*, Exhibit 17 at p. 4; Exhibit 27 at p. 12; Exhibit 70 at p. 28), the Element Definitions often included the express assumption that ASME NQA1-qualified vendors were available. *See, e.g.*, Exhibit 35, Electrical Element Definition; Exhibit 35, HVAC Element Definition.

³⁴⁶ MOX Services does not contend that either it or the government knew that the Option 1 estimates would prove to be inaccurate; rather, the record shows that at the time there was insufficient information available about the true scope of the Project for the parties to draw founded conclusions about the likely accuracy of the estimates.

³⁴⁷ Exhibit 36, EIR (May 2006) at p. 4.

³⁴⁸ *See* Exhibit 113, Memorandum from Bruce Scott to Linton F. Brooks (July 9, 2006), Design Review Schedule Attachment. This Schedule called for the following reviews: CP 22, BMP Instrumentation (Nov. 20, 2008); CP 23. MFFF HVAC (Oct. 31, 2006); CP 27, AP Piping (Sept. 25, 2006); and CP 28, AP Instrumentation (Jan. 10, 2007).

³⁴⁹ *Id.*

³⁵⁰ *See* Exhibit 18, RCA, at p. 2-13 (discussing the Project risks introduced when DOE/NNSA fast-tracked the MFFF procurement and construction based on insufficient designs).

things, (1) design reviews had not been performed on major construction packages, (2) contingency estimates had been developed only on “the design completed to date and not the full MOX Project,” and (3) “[f]irst-of-a-kind, new technology complex large scale projects typically carry contingency estimates in the 50%-100% range of the to-go costs.”³⁵¹ The memorandum concluded by counseling against authorizing Critical Decision 2 to establish the performance baseline.³⁵²

Validating what NNSA knew at the time of the Option 1 estimates, the 2014 Root Cause Analysis repeatedly cited the underdevelopment of designs as a major cause for the insufficient estimates contained in the 2007 Baseline. The RCA faulted the 2007 Baseline approval for being based on “incomplete front-end planning,” stating that the early cost estimates “were based on a level of design that would only support a conceptual level estimate.”³⁵³ The RCA further concluded that the earliness of the CD-2/3 cost estimate led to an under appreciation of the difficulty of translating the French reference plant design to the U.S. MFFF.³⁵⁴

E. Conclusion: MOX Services Is Entitled To Fee On The Increased Costs For MFFF Systems Construction That DOE Caused To Be Underestimated in Option 1

The circumstances presented here are substantially similar to those in *Ferguson*. In both cases the contracting agency was responsible for causing the contractor to submit estimates and negotiate the associated fee when the available designs were insufficient to support accurate estimates. And, just as the late-arriving designs in *Ferguson* caused space redesigns, utilities growth, and increased level-of effort (57-1 BCA ¶1293 at 22, 25), here, too, the evolving designs during construction caused MOX Services to incur significantly higher than anticipated costs. Two examples illustrate the similarities between *Ferguson* and this matter.

First, in *Ferguson* many of the process unit designs were classified when the contract was negotiated, thus the government was responsible for their unavailability to the contractor. Likewise here, as more fully explained in the PUDC Section of this Claim, due to concerns over the Russian parallelism requirement, DOE did not allow MOX Services to conduct pre-Option 1 pilot procurements with process unit vendors.

³⁵¹ Exhibit 113, at p. 2.

³⁵² *Id.* at p. 3. The Root Cause Analysis notes that NNSA has since directed that design must be at least 90% complete before Critical Decision 2, a mark that the MOX Project was far from meeting. Exhibit 18, RCA, at p. 2-12 (citing NA-APM Memorandum, Ninety Percent Design Implementation Guidance for [NNSA] Construction Projects, August 9, 2012).

³⁵³ Exhibit 18, RCA at 2.3 CID-3.

³⁵⁴ *Id.* at 2.5.1 CF1; 2.6.3 CF3.

As was revealed when MOX Services conducted such pilots much later, contrary to the parties' expectations when the estimates for Option 1 were established, the French reference plant designs did not translate nearly so fluently or eloquently across the decades and into the NRC's strict regulatory regime. Ultimately, the Project diverged substantially from the "replicate the French plants" principle underlying many of the cost estimates. In these circumstances, no less so than in the case of *Ferguson's* classified designs, the government was responsible for the critical information deficit at the time of the Option 1 estimates.

Second, the bacterial warfare facility in *Ferguson* worked under a number of unique and burdensome safety requirements. An earlier accidental exposure of workers to bacterial agents caused the process equipment developer "to become very safety conscious, and it inaugurated safety standards which greatly increased the complexity and expense of the project." 57-1 BCA ¶1293 at 10. Among the unanticipated costs associated with the safety features, the facility in *Ferguson* required special cement plaster finish on all interior walls, venting hoods on all bacteria work cabinets that cost "considerably in excess of that originally contemplated," air locks and door controls to segregate particular rooms, a special, dedicated water supply, and unique stainless steel piping constructed under very stringent requirements, including "a special welding process" that required "special techniques and procedures." *Id.* at 1-5, 7.

So too here, as found by the DOE-commissioned Root Cause Analysis, in many instances safety systems ("IROFS") "were selected on the basis of overly conservative assumptions intended to accommodate design uncertainty that existed at the time that the license application was submitted to the NRC."³⁵⁵ For example, the gloveboxes were considered IROFS for secondary containment protection to confine radioactive material in an earthquake. Further, each process room was designed to be a segregated fire barrier, a scheme that the RCA concluded "was overly complex and conservative."³⁵⁶

Importantly, as in *Ferguson*, the Project record gives every indication that the parties had little appreciation for the cost impacts the conservative decisions regarding IROFs would impose on the Project. This is because DOE required MOX Services to focus on achieving a licensable design, and not a design that was relatively straightforward to estimate or construct. It was also due to NNSA requiring MOX Services to submit the estimates on which Option 1 would be based well before anyone had a firm grasp of just how usable the French reference plant designs would be or how difficult it would be to meet the NRC's stringent licensing requirements. The record shows that the government did so for political reasons and expediency.

In sum, when time proved the estimating basis, *i.e.*, the designs, to be unsound, the *Ferguson* Board found the "conclusion ... inescapable that the work actually performed by

³⁵⁵ RCA, Exhibit 18 at 2-9.

³⁵⁶ *Id.*

[the contractor] materially exceeded in amount and character the work contemplated by the contract.” 57-1 BCA ¶1293 at 22. Because the government was responsible for the original low estimates’ failure to reflect the work the contractor actually performed and not the contractor’s own errors or omissions, the Board concluded that Ferguson was entitled to fee on the additional costs. *Id.* at 25. Likewise here, DOE was responsible for MOX Services’ Option 1 estimates being unrealistically low, and accordingly, DOE is liable to pay fee to account for the additional MFFF systems construction costs MOX Services has experienced on the Project.

CB&I AREVA MOX Services, LLC.
MFFF Construction Change Claim Summary

Schedule 5.0

	[A]	[B]	[C] = B - A	[D]
	<u>2007 Baseline</u>	<u>2012 Rebaseline with Addendum</u>	<u>Cost Growth</u>	<u>Claim Amount</u>
MFFF Construction Change Costs	\$ 1,095,548,855	\$ 2,295,415,649	\$ 1,199,866,793	\$ 1,198,566,862

Sources:

Schedule 5.01

Schedule 5.01

**CB&I AREVA MOX Services, LLC.
MFFF Construction Change Summary**

	[A]	[B]	[C] = B - A	[D]
Category Description	2007 Baseline	2012 Rebaseline with Addendum	Cost Growth	Claim Amount
Installation	\$ 817,738,444	\$ 1,602,357,424	\$ 784,618,980	\$ 783,349,620
Materials	244,861,751	601,793,073	356,931,323	356,920,702
Total - Installation and Materials	\$ 1,062,600,195	\$ 2,204,150,497	\$ 1,141,550,303	\$ 1,140,270,322
Title III Engineering	32,948,661	91,265,151	58,316,491	58,296,541
Total	\$ 1,095,548,855	\$ 2,295,415,649	\$ 1,199,866,793	\$ 1,198,566,862

Sources:

Schedule 5.1

CB&I AREVA MOX Services, LLC.

Schedule 5.1

MFFF Construction Change - Adjustment for Non-DCS Costs

Description	[A]	[B]	[C] = B - A	Support Schedule
	2007 Baseline	2012 Rebaseline with Addendum	Cost Growth	
Installation	\$ 817,738,444	\$ 1,602,357,424	\$ 784,618,980	Schedule 5.3
Less: Non-DCS Costs			1,269,360	Schedule 5.2
Claim Amount			\$ 783,349,620	
Materials	244,861,751	601,793,073	\$ 356,931,323	Schedule 5.3
Less: Non-DCS Costs			10,621	Schedule 5.2
Claim Amount			\$ 356,920,702	
Title III Engineering	32,948,661	91,265,151	58,316,491	Schedule 5.3
Less: Non-DCS Costs			19,950	Schedule 5.2
Claim Amount			\$ 58,296,541	
Total MFFF Construction Change Claim Amount			\$ 1,198,566,862	

CB&I AREVA MOX Services, LLC.
MFFF Construction Change - Non-DCS Cost Detail

				[A]	[B]	[C] = B - A
Cost Account	Cost Account Description	CE Code	CE Description	2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1721.2101	Site Preparation	ND	Non-DCS Cost	\$ 28,296,998	\$ 28,442,240	\$ 145,242
1722.2202	F" Road"	ND	Non-DCS Cost	2,736,821	2,793,506	56,685
1724.2401	Underground Utilities	ND	Non-DCS Cost	3,029	145,189	142,160
1725.2501	Yard Fire Protection	ND	Non-DCS Cost	-	2,305	2,305
1728.2801	Yard Electrical & Lighting	ND	Non-DCS Cost	-	11,481	11,481
1731.3150	Administration Building	ND	Non-DCS Cost	-	58,950	58,950
1733.3350	Secured Warehouse Building	ND	Non-DCS Cost	-	227	227
1734.3450	Tech Support & Access Control Building	ND	Non-DCS Cost	-	1,663	1,663
1741.4100	Building Structure	ND	Non-DCS Cost	1,623,845	1,612,899	(10,946)
1751.5100	Building Structure	ND	Non-DCS Cost	865,045	859,223	(5,822)
1751.5150	Process Piping & Equipment	ND	Non-DCS Cost	-	884	884
1761.6100	Building Structure	ND	Non-DCS Cost	998,353	991,832	(6,521)
1772.7210	Architectural Features	ND	Non-DCS Cost	-	-	-
1774.7410	Miscellaneous Procured Services	ND	Non-DCS Cost	-	261,097	261,097
1774.7416	Independent Test Lab	ND	Non-DCS Cost	-	582,588	582,588
1774.7417	NDE Testing	ND	Non-DCS Cost	-	29,368	29,368
Subtotal - Installation				\$ 34,524,091	\$ 35,793,451	\$ 1,269,360
1774.7433	Instrumentation & Controls Material	ND	Non-DCS Cost	\$ -	\$ 163	\$ 163
1774.7438	Mechanical Equipment	ND	Non-DCS Cost	-	10,458	10,458
1774.7439	Consumable & Expendable Materials Specific to CP-27 – BAP Chemical P	ND	Non-DCS Cost	-	-	-
Subtotal - Materials				\$ -	\$ 10,621	\$ 10,621
1003.8034	Electrical / I&C Site Construction Support	ND	Non-DCS Cost	-	19,950	19,950
Subtotal - Title III Engineering				\$ -	\$ 19,950	\$ 19,950
Total				\$ 34,524,091	\$ 35,824,022	\$ 1,299,931

Sources:

[A] May 2007 PRISM Data adjusted for budget transfers between July 2007 and September 2012

[B] 2012 contract proposal value as stated in December 2012 PRISM data and adjusted for 2012 Rebaseline Addendums

[C] Calculated

CB&I AREVA MOX Services, LLC.
MFFF Construction Change Cost Growth by Cost Account

Schedule 5.3

Cost Account	Functional Area Descriptions	Cost Account Description	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1721.2101	Site Preparation	Site Preparation	\$ 29,136,316	\$ 29,492,485	\$ 356,169
1722.2201	Roads & Parking	Roads & Parking	1,853,353	1,770,466	(82,887)
1722.2202	Roads & Parking	F" Road"	5,529,770	3,767,924	(1,761,846)
1723.2301	Yard Structures	Yard Structures	2,222,753	3,861,339	1,638,586
1723.2501	Yard Structures		-	-	-
1724.2401	Underground Utilities	Underground Utilities	10,809,194	21,315,647	10,506,454
1725.2501	Yard Fire Protection	Yard Fire Protection	2,374,082	3,091,847	717,765
1726.2601	Chillers	Chillers	3,996,349	6,597,688	2,601,339
1727.2701	Site Security / PIDAS	Site Security and Perimeter Intrusion Detection and Assessment Syste	33,756,358	46,557,859	12,801,501
1728.2801	Yard Electrical & Lighting	Yard Electrical & Lighting	6,479,079	6,076,996	(402,083)
1729.2901	Landscaping	Landscaping	438,164	334,321	(103,843)
1731.3150	Administration Building (BAD)	Administration Building	8,158,478	11,047,671	2,889,193
1732.3250	Receiving Warehouse Building	Receiving Warehouse Building	2,342,535	1,257,230	(1,085,305)
1732.3550	Receiving Warehouse Building		1	-	(1)
1733.3350	Secured Warehouse Building	Secured Warehouse Building	3,768,379	4,429,712	661,333
1734.3450	Tech Support & Access Control Bldg.	Tech Support & Access Control Building	7,129,799	20,551,164	13,421,365
1735.3550	Standby Diesel Generator Bldg.	Standby Diesel Generator Building	3,573,745	-	(3,573,745)
1735.3556	Standby Diesel Generator Bldg.	Standby Diesel Generator System/Equip.	-	-	-
1736.3652	Emergency Diesel Generator Bldg.	Civil / Structural / Architectural	1,234,783	12,694,518	11,459,735
1736.3653	Emergency Diesel Generator Bldg.	Mechanical / Piping	1,519,602	5,681,459	4,161,857
1736.3654	Emergency Diesel Generator Bldg.	Electrical	2,419,944	12,245,457	9,825,513
1736.3655	Emergency Diesel Generator Bldg.	I&C	386,727	672,465	285,738
1736.3656	Emergency Diesel Generator Bldg.	Emerg.Diesel Gen.System/Equipment	7,797,805	10,668,334	2,870,529
1737.3751	Reagents Process Building	Design	1,400,000	3,061,059	1,661,059
1737.3752	Reagents Process Building	Civil / Structural / Architectural	1,852,989	2,335,417	482,428
1737.3753	Reagents Process Building	Mechanical / Piping	7,584,611	2,577,658	(5,006,953)
1737.3754	Reagents Process Building	Electrical	3,535,409	916,676	(2,618,733)
1737.3755	Reagents Process Building	I&C	5,243,898	58,855	(5,185,043)
1737.3756	Reagents Process Building	Reagent Systems Equipment / Piping	824,061	9,741,737	8,917,676
1741.4100	MOX Process Area Level 1	Building Structure	42,141,101	48,980,823	6,839,722
1741.4110	MOX Process Area Level 1	Architectural Features	1,286,559	12,573,673	11,287,114
1741.4120	MOX Process Area Level 1	HVAC	5,143,021	36,376,411	31,233,390
1741.4130	MOX Process Area Level 1	MOX Processing Area (BMP) – MOX Processing Area – Level 1 – Fire Pro	5,210,678	12,698,949	7,488,272
1741.4140	MOX Process Area Level 1	Utility Equipment & Piping	4,467,807	2,083,905	(2,383,902)
1741.4150	MOX Process Area Level 1	Process Piping	14,137,249	17,941,478	3,804,229
1741.4170	MOX Process Area Level 1	Other Equipment	7,913,483	7,094,780	(818,703)
1741.4180	MOX Process Area Level 1	Electrical	12,710,594	47,210,472	34,499,878
1741.4190	MOX Process Area Level 1	Instrumentation	13,114,418	2,734,549	(10,379,870)
1742.4200	MOX Process Area Level 2	Building Structure	22,770,514	35,620,852	12,850,338
1742.4210	MOX Process Area Level 2	Architectural Features	(191,335)	4,607,399	4,798,734
1742.4220	MOX Process Area Level 2	HVAC	7,638,103	20,971,266	13,333,163
1742.4230	MOX Process Area Level 2	MOX Processing Area (BMP) – MOX Processing Area – Level 2 – Fire Pro	6,021,572	14,596,534	8,574,962
1742.4240	MOX Process Area Level 2	Utility Equipment & Piping	1,220,714	42,641	(1,178,073)
1742.4250	MOX Process Area Level 2	Process Piping	7,971,156	11,361,603	3,390,447

CB&I AREVA MOX Services, LLC.
MFFF Construction Change Cost Growth by Cost Account

Schedule 5.3

Cost Account	Functional Area Descriptions	Cost Account Description	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1742.4270	MOX Process Area Level 2	Other Equipment	2,454,660	2,570,349	115,689
1742.4280	MOX Process Area Level 2	Electrical	14,912,858	29,359,393	14,446,535
1742.4290	MOX Process Area Level 2	Instrumentation	7,707,535	1,728,847	(5,978,688)
1742.4600	MOX Process Area Level 2		(167)	-	167
1743.4300	MOX Process Area Level 3	Building Structure	-	28,748,394	28,748,394
1743.4310	MOX Process Area Level 3	Architectural Features	215,717	5,178,527	4,962,810
1743.4320	MOX Process Area Level 3	HVAC	15,793,051	36,243,152	20,450,100
1743.4330	MOX Process Area Level 3	MOX Processing Area (BMP) – MOX Processing Area – Level 3 – Fire Pro	6,408,576	9,592,492	3,183,916
1743.4340	MOX Process Area Level 3	Utility Equipment & Piping	1,757,160	104,868	(1,652,292)
1743.4350	MOX Process Area Level 3	Process Piping	14,311,410	14,276,183	(35,227)
1743.4370	MOX Process Area Level 3	Other Equipment	114,045	1,178,593	1,064,548
1743.4380	MOX Process Area Level 3	Electrical	14,716,737	33,580,847	18,864,110
1743.4390	MOX Process Area Level 3	Instrumentation	18,198,930	19,678,197	1,479,267
1744.4400	MOX Process Area Roof/Other	Building Structure	837,780	12,198,268	11,360,488
1744.4410	MOX Process Area Roof/Other	Architectural Features	79,148	-	(79,148)
1744.4420	MOX Process Area Roof/Other	HVAC	353,456	2,882,398	2,528,942
1744.4430	MOX Process Area Roof/Other	MOX Processing Area (BMP) – MOX Processing Area – Level 4 – Fire Pr	249,976	83,530	(166,446)
1744.4440	MOX Process Area Roof/Other	Utility Equipment & Piping	581,867	610,698	28,831
1744.4480	MOX Process Area Roof/Other	Electrical	78,559	946,936	868,377
1744.4490	MOX Process Area Roof/Other	Instrumentation	(39,748)	52,684	92,432
1746.4600	MOX Process Area Equipment Installation	Fuel Assembly / Rods	4,898,683	4,513,528	(385,155)
1746.4610	MOX Process Area Equipment Installation	Powder & Pellets	18,241,062	13,852,934	(4,388,128)
1746.4620	MOX Process Area Equipment Installation	Furnaces & Pellet Storage	3,989,918	3,217,081	(772,837)
1746.4630	MOX Process Area Equipment Installation	PuO2 Receiving, Storage & Decanning	3,434,938	1,593,800	(1,841,138)
1746.4640	MOX Process Area Equipment Installation	Labs & Testing	36,210,885	35,673,183	(537,702)
1751.5100	AP Process Area Level 1	Building Structure	18,030,779	21,310,875	3,280,096
1751.5110	AP Process Area Level 1	Architectural Features	205,275	7,294,497	7,089,222
1751.5120	AP Process Area Level 1	HVAC	2,289,145	8,716,658	6,427,513
1751.5130	AP Process Area Level 1	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 1 –	1,247,530	1,801,582	554,052
1751.5140	AP Process Area Level 1	Utility Equipment & Piping	3,277,473	1,933,426	(1,344,046)
1751.5150	AP Process Area Level 1	Process Piping & Equipment	20,664,387	63,273,713	42,609,326
1751.5170	AP Process Area Level 1	Other Equipment	998,403	2,006,893	1,008,490
1751.5180	AP Process Area Level 1	Electrical	2,199,273	17,201,810	15,002,537
1751.5190	AP Process Area Level 1	Instrumentation	2,886,311	776,284	(2,110,026)
1751.5250	AP Process Area Level 1		-	-	-
1751.5700	AP Process Area Level 1		-	-	-
1752.5200	AP Process Area Level 2	Building Structure	5,326,583	9,451,743	4,125,160
1752.5210	AP Process Area Level 2	Architectural Features	(11,660)	1,248,731	1,260,391
1752.5220	AP Process Area Level 2	HVAC	3,076,650	5,815,594	2,738,943
1752.5230	AP Process Area Level 2	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 2 –	772,172	1,481,053	708,881
1752.5240	AP Process Area Level 2	Utility Equipment & Piping	799,083	668,407	(130,676)
1752.5250	AP Process Area Level 2	Process Piping & Equipment	22,325,326	103,387,615	81,062,289
1752.5270	AP Process Area Level 2	Other Equipment	1,739,491	451,468	(1,288,023)
1752.5280	AP Process Area Level 2	Electrical	4,274,729	14,240,247	9,965,518

CB&I AREVA MOX Services, LLC.
MFFF Construction Change Cost Growth by Cost Account

Schedule 5.3

Cost Account	Functional Area Descriptions	Cost Account Description	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1752.5290	AP Process Area Level 2	Instrumentation	3,457,434	979,949	(2,477,485)
1753.5300	AP Process Area Level 3	Building Structure	7,043,044	18,004,541	10,961,497
1753.5310	AP Process Area Level 3	Architectural Features	(7,882)	1,752,632	1,760,514
1753.5320	AP Process Area Level 3	HVAC	2,842,768	5,006,959	2,164,191
1753.5330	AP Process Area Level 3	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 3 –	803,128	1,850,451	1,047,323
1753.5340	AP Process Area Level 3	Utility Equipment & Piping	570,699	240,601	(330,098)
1753.5350	AP Process Area Level 3	Process Piping & Equipment	12,311,041	15,128,246	2,817,205
1753.5370	AP Process Area Level 3	Other Equipment	6,140	729,933	723,793
1753.5380	AP Process Area Level 3	Electrical	8,088,441	16,393,472	8,305,031
1753.5390	AP Process Area Level 3	Instrumentation	4,125,471	1,390,017	(2,735,454)
1754.5400	AP Process Area Level 4	Building Structure	-	5,868,741	5,868,741
1754.5410	AP Process Area Level 4	Architectural Features	27,732	1,700,960	1,673,228
1754.5420	AP Process Area Level 4	HVAC	2,895,119	4,469,887	1,574,769
1754.5430	AP Process Area Level 4	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 4 –	987,070	2,143,927	1,156,857
1754.5440	AP Process Area Level 4	Utility Equipment & Piping	1,509,067	1,364,002	(145,065)
1754.5450	AP Process Area Level 4	Process Piping & Equipment	10,269,733	15,901,164	5,631,431
1754.5470	AP Process Area Level 4	Other Equipment	585,252	503,476	(81,776)
1754.5480	AP Process Area Level 4	Electrical	4,732,941	16,215,664	11,482,723
1754.5490	AP Process Area Level 4	Instrumentation	7,283,214	814,419	(6,468,795)
1754.5540	AP Process Area Level 4		2,231	-	(2,231)
1755.5500	AP Process Area Level 5	Building Structure	-	10,560,583	10,560,583
1755.5510	AP Process Area Level 5	Architectural Features	130,702	2,112,694	1,981,992
1755.5520	AP Process Area Level 5	HVAC	3,234,191	9,439,141	6,204,950
1755.5530	AP Process Area Level 5	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 5 –	1,653,686	1,390,009	(263,677)
1755.5540	AP Process Area Level 5	Utility Equipment & Piping	2,235,565	2,042,028	(193,537)
1755.5550	AP Process Area Level 5	Process Piping & Equipment	12,301,514	9,663,694	(2,637,820)
1755.5570	AP Process Area Level 5	Other Equipment	353,332	213,102	(140,230)
1755.5580	AP Process Area Level 5	Electrical	3,703,393	13,361,396	9,658,003
1755.5590	AP Process Area Level 5	Instrumentation	13,320,716	15,438,044	2,117,327
1756.5600	AP Process Area Roof/Other	Building Structure	6,165,298	5,340,300	(824,998)
1756.5670	AP Process Area Roof/Other	Other Equipment	3,829,080	-	(3,829,080)
1756.5680	AP Process Area Roof/Other	Electrical	-	187,169	187,169
1756.5690	AP Process Area Roof/Other	Instrumentation	-	10,436	10,436
1757.5730	AP Process Area Unit Groups	PAF	-	35,808	35,808
1758.5810	AP Process Area Equip Installation	Mechanical Systems	12,540,902	11,156,856	(1,384,046)
1758.5850	AP Process Area Equip Installation	Chemical Systems	2,438,555	7,082,040	4,643,485
1761.6100	S&R Area Level 1	Building Structure	18,229,486	21,483,846	3,254,360
1761.6110	S&R Area Level 1	Architectural Features	2,028,305	4,960,379	2,932,074
1761.6120	S&R Area Level 1	HVAC	1,435,517	4,364,621	2,929,105
1761.6130	S&R Area Level 1	Shipping and Receiving Area (BSR) – Shipping and Receiving Area – Le	1,605,863	1,443,333	(162,529)
1761.6140	S&R Area Level 1	Utility Equipment & Piping	1,406,932	948,598	(458,335)
1761.6150	S&R Area Level 1	Process Piping	330,741	1,199,682	868,941
1761.6170	S&R Area Level 1	Other Equipment	258,851	358,450	99,599
1761.6180	S&R Area Level 1	Electrical	9,717,335	9,076,335	(641,000)

CB&I AREVA MOX Services, LLC.
MFFF Construction Change Cost Growth by Cost Account

Schedule 5.3

Cost Account	Functional Area Descriptions	Cost Account Description	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1761.6190	S&R Area Level 1	Instrumentation	468,092	1,093,509	625,417
1762.6200	S&R Area Level 2	Building Structure	6,002,734	11,030,640	5,027,906
1762.6210	S&R Area Level 2	Architectural Features	35,534	808,993	773,459
1762.6220	S&R Area Level 2	HVAC	2,833,861	7,875,915	5,042,054
1762.6230	S&R Area Level 2	Shipping and Receiving Area (BSR) – Shipping and Receiving Area – Le	1,254,324	1,448,395	194,071
1762.6240	S&R Area Level 2	Utility Equipment & Piping	107,201	20,100	(87,101)
1762.6250	S&R Area Level 2	Process Piping	186,238	311,367	125,129
1762.6270	S&R Area Level 2	Other Equipment	-	34,875	34,875
1762.6280	S&R Area Level 2	Electrical	2,433,971	5,336,801	2,902,830
1762.6290	S&R Area Level 2	Instrumentation	120,382	334,483	214,102
1763.6300	S&R Area Level 3	Building Structure	-	5,600,636	5,600,636
1763.6310	S&R Area Level 3	Architectural Features	477,402	1,669,516	1,192,114
1763.6320	S&R Area Level 3	HVAC	2,563,310	7,568,000	5,004,690
1763.6330	S&R Area Level 3	Shipping and Receiving Area (BSR) – Shipping and Receiving Area – Le	1,755,869	1,659,212	(96,657)
1763.6340	S&R Area Level 3	Utility Equipment & Piping	146,215	58,334	(87,881)
1763.6350	S&R Area Level 3	Process Piping	45,070	863,815	818,745
1763.6370	S&R Area Level 3	Other Equipment	7,331	105,520	98,189
1763.6380	S&R Area Level 3	Electrical	1,079,778	8,730,876	7,651,098
1763.6390	S&R Area Level 3	Instrumentation	1,591,341	1,779,241	187,901
1764.6400	S&R Area Roof/Other	Building Structure	-	3,072,441	3,072,441
1764.6470	S&R Area Roof/Other	Other Equipment	6,602	-	(6,602)
1764.6480	S&R Area Roof/Other	Electrical	-	186,341	186,341
1764.6490	S&R Area Roof/Other	Instrumentation	-	10,457	10,457
1771.7100	Safe Havens (BSH)	Building Structure	7,436,315	8,425,791	989,476
1771.7110	Safe Havens (BSH)	Architectural Features	7,146,295	1,420,056	(5,726,239)
1771.7120	Safe Havens (BSH)	HVAC	927,006	4,359,752	3,432,746
1771.7130	Safe Havens (BSH)	Fire Protection	2,988	-	(2,988)
1771.7140	Safe Havens (BSH)	Utility Equipment & Piping	8,055	35,057	27,002
1771.7170	Safe Havens (BSH)	Other Equipment	328	-	(328)
1771.7180	Safe Havens (BSH)	Electrical	3,131,063	1,682,127	(1,448,936)
1771.7190	Safe Havens (BSH)	Instrumentation	231,865	86,625	(145,240)
1772.7200	Gabion Walls & Fills	Building Structure	25,824,745	39,222,116	13,397,371
1772.7210	Gabion Walls & Fills	Architectural Features	1,068,385	31,026,898	29,958,513
1772.7270	Gabion Walls & Fills	Other Equipment	274,440	113,238	(161,202)
1772.7280	Gabion Walls & Fills	Electrical	1,039,438	1,091,331	51,893
1774.7401	Distributables	Subcontractor Project Management/Project Controls	6,598,306	72,846,805	66,248,499
1774.7402	Distributables	Subcontractor Project Administration/Accounting	-	-	-
1774.7403	Distributables	Subcontractor Quality Assurance / Quality Control	-	-	-
1774.7404	Distributables	Subcontractor Environmental, Safety and Health	-	3	3
1774.7405	Distributables	Subcontractor Home Office Support	-	-	-
1774.7406	Distributables	Subcontractor Mobilization	437,300	859,829	422,528
1774.7407	Distributables	Subcontractor Demobilization	26,800	580,131	553,331
1774.7408	Distributables	Dewatering, Erosion and Sedimentation Control	176,470	176,470	(0)
1774.7409	Distributables	Equipment Rental (Including Vehicles)	2,356,013	20,944,738	18,588,725

CB&I AREVA MOX Services, LLC.
MFFF Construction Change Cost Growth by Cost Account

Schedule 5.3

Cost Account	Functional Area Descriptions	Cost Account Description	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1774.7410	Distributables	Miscellaneous Procured Services	225,600	1,447,138	1,221,538
1774.7411	Distributables	Consumables and Expendable Materials	775,267	4,263,877	3,488,610
1774.7412	Distributables	Performance Bond	871,448	1,107,034	235,586
1774.7413	Distributables	Tools	196,633	387,367	190,734
1774.7414	Distributables	Craft Distributable and Indirect Costs	3,766,887	14,124,171	10,357,284
1774.7415	Distributables	Concrete Batch Plant	3,778,207	3,778,185	(22)
1774.7416	Distributables	Independent Test Lab	1,018,992	1,887,424	868,432
1774.7417	Distributables	NDE Testing	874,858	904,226	29,368
1774.7418	Distributables	Craft Support for MFFF Construction	1,445,077	23,870,675	22,425,598
1774.7440	Distributables	Support Building for the Fabrication of Supports on Site Specific to	-	39,366,963	39,366,963
1774.7441	Distributables	BRP Distributables	-	481,143	481,143
1774.7442	Distributables	Craft Labor for Non-Discipline Specific Scope	-	7,070,939	7,070,939
1774.7445	Distributables	Craft Orientation & Training	-	3,113,237	3,113,237
1774.7446	Distributables	MOX Construction Back Charges	-	-	-
1774.7453	Distributables	Craft Orientation & Training	-	125,868	125,868
1774.7454	Distributables	Bulk Procurement - Material	-	253,976	253,976
1774.7455	Distributables	Distributable - Subcontract	-	750,385	750,385
1775.7501	Batch Paint	Batch Plant Capital Cost	-	-	-
1775.7502	Batch Paint	Batch Plant Operations	-	0	0
1775.7503	Batch Paint	Batch Plant Concrete Materials	-	(0)	(0)
Total Installation			\$ 817,738,444	\$ 1,602,357,424	\$ 784,618,980
1774.7419	Distributables	Construction Distributables - Misc	\$ 8,997,911	\$ 44,517,380	\$ 35,519,469
1774.7420	Distributables	Bulk Cable for MFFF Construction	10,123,467	36,510,224	26,386,757
1774.7421	Distributables	Electrical Connectors for MFFF Construction	-	-	-
1774.7422	Distributables	Electric Glove Box Penetrations for MFFF Construction	-	-	-
1774.7424	Distributables	Distributables - Bulk Commodity - HVAC	16,844,578	17,545,355	700,777
1774.7427	Distributables	Rebar MFFF Construction	-	59,420	59,420
1774.7428	Distributables	Civil/Structural Material	12,784,971	44,341,502	31,556,531
1774.7429	Distributables	Distributables - Bulk Commodity - Stainless Steel Ball Valves	17,659,657	17,088,381	(571,276)
1774.7430	Distributables	Distributable - Bulk Commodity Account - Chillers	2,428,798	2,321,091	(107,707)
1774.7431	Distributables	Bulk Commodity - Fans	-	-	-
1774.7432	Distributables	Electrical Material and Other Miscellaneous Labor Acct	15,115,366	81,807,066	66,691,700
1774.7433	Distributables	Instrumentation & Controls Material	97,473,686	73,807,772	(23,665,914)
1774.7434	Distributables	Chemical Equipment	-	9,905,742	9,905,742
1774.7435	Distributables	Distributables - HVAC Equipment	7,046,692	92,131,147	85,084,455
1774.7436	Distributables	Suspense Account - Process Equipment	-	36,697	36,697
1774.7438	Distributables	Mechanical Equipment	54,802,155	143,942,463	89,140,308
1774.7439	Distributables	Consumable & Expendable Materials Specific to CP-27 – BAP Chemical P	1,584,469	37,778,832	36,194,363
Total Materials			\$ 244,861,751	\$ 601,793,073	\$ 356,931,323
Total - Installation and Materials			\$ 1,062,600,195	\$ 2,204,150,497	\$ 1,141,550,303
1000.8037		Mechanical – Construction Support	\$ -	\$ -	\$ -

CB&I AREVA MOX Services, LLC.
MFFF Construction Change Cost Growth by Cost Account

Schedule 5.3

Cost Account	Functional Area Descriptions	Cost Account Description	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1003.8032	Site Construction Support	Civil / Structural	3,786,460	21,309,941	17,523,481
1003.8034	Site Construction Support	Electrical / I&C Site Construction Support	9,085,875	26,236,366	17,150,490
1003.8035	Site Construction Support	Chemical-Construction Support	4,589,292	7,654,227	3,064,935
1003.8036	Site Construction Support	Mechanical – Construction Support	1,259,111	5,993,434	4,734,323
1003.8037	Site Construction Support	Plant Configuration Site Construction Support	11,694,072	24,406,806	12,712,734
1003.8038	Site Construction Support	Engineering Mechanics - Site Construction Support	1,100,594	1,889,064	788,470
1004.8040	Procurement & Fabrication Support	Responsible Engineer Process Unit Fabrication Support	-	-	-
1004.8044	Procurement & Fabrication Support	Electrical / I&C Procurement and Fabrication Support	(145,000)	2,589	147,589
1004.8046	Procurement & Fabrication Support	Chemical-Procurement/Fabrication Support	(474,839)	3,032,980	3,507,819
1004.8047	Procurement & Fabrication Support	Mechanical – Procurement/Fabrication Support	324,345	319,072	(5,273)
1005.8052	Start-up & Operations Support	Mechanical – Startup & Operations Support	1,090,249	300,099	(790,150)
1005.8053	Start-up & Operations Support	Electrical / IC Startup and Operations Support	366,145	-	(366,145)
1005.8054	Start-up & Operations Support	Civil/ Structural Startup Support	-	-	-
1005.8057	Start-up & Operations Support	Chemical/Mechanical Engineering Startup Support	272,356	120,575	(151,781)
1007.8071	Engineered Equipment Procurements	Chemical Related Engineered Equipment	-	-	-
1007.8072	Engineered Equipment Procurements	Electrical Related Engineered Equipment	-	-	-
1007.8073	Engineered Equipment Procurements	Instrumentation & Control Related Engineered Equipment	-	-	-
1007.8074	Engineered Equipment Procurements	HVAC Related Engineered Equipment	-	-	-
1007.8075	Engineered Equipment Procurements	Miscellaneous Engineered Equipment	-	-	-
Total Title III Engineering			\$ 32,948,661	\$ 91,265,151	\$ 58,316,491
Total MFFF Construction Change Cost Growth			\$ 1,095,548,855	\$ 2,295,415,649	\$ 1,199,866,793

Sources:

Schedule 6.11

CB&I AREVA MOX Services, LLC.

SUPPORTING SCHEDULES

CB&I AREVA MOX Services, LLC.
MFFF Project Cost Summary by Claim Category

Schedule 6.0

	[A]	[B]	[C] = B - A
Claim Category	2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
Option 1 Contract			
Process Units - Direct	\$ 345,543,884	\$ 858,791,412	\$ 513,247,529
Process Units - Hotel Load	799,014,425	1,612,646,690	813,632,265
MFFF Construction - Title III Engineering	32,948,661	91,265,151	58,316,491
MFFF Construction - Installation/Materials	1,062,600,195	2,204,150,497	1,141,550,303
Construction Management	61,514,495	214,585,261	153,070,766
Quality Assurance	23,023,054	168,879,568	145,856,514
All Other	454,177,767	413,432,801	(40,744,966)
Option 1 Subtotal	\$ 2,778,822,480	\$ 5,563,751,381	\$ 2,784,928,901
Base Contract	\$ 872,066,279	\$ 1,050,750,205	\$ 178,683,926
MFFF Project Total	\$ 3,650,888,759	\$ 6,614,501,585	\$ 2,963,612,827

Sources:

Schedule 6.11

CB&I AREVA MOX Services, LLC.
MFFF Project Cost by Management Area

Schedule 6.1

Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
0601.6000	Project Office Operations	Option 1	\$ 6,428,099	\$ 9,225,064	\$ 2,796,965
0601.6001	Communications	Option 1	4,046,177	7,137,056	3,090,879
0601.6002	Special Projects	Option 1	209,586	9,995,270	9,785,684
0601.6003	Employee Incentive Program	Option 1	-	113	113
0601.6004	Project Off-Site Operations	Option 1	2,145,784	11,006,133	8,860,349
0601.6005	Projects Oversight	Option 1	6,630,465	16,667,313	10,036,848
0601.6009	Relocations	Option 1	10,730,106	38,306,079	27,575,973
0602.6010	Project Controls	Option 1	23,119,500	42,470,552	19,351,052
0602.6011	Risk Management	Option 1	891,857	753,578	(138,279)
0603.6020	QA Program Management & Administration	Option 1	1,451,615	1,437,299	(14,316)
0603.6021	Quality Engineering	Option 1	2,718,261	2,861,506	143,245
0603.6022	Audit & Surveillance	Option 1	1,379,395	1,363,028	(16,367)
0603.6023	Quality Control - Labor	Option 1	2,177,354	2,400,403	223,049
0603.6024	QA / QC Assembly Group Support	Option 1	775,405	536,953	(238,452)
0603.6025	MOX Potential Back Charges	Option 1	-	222,526	222,526
0604.6030	PS&A Administrative Support	Option 1	12,594,428	40,294,967	27,700,539
0604.6031	Human Resources	Option 1	15,162,029	25,211,837	10,049,808
0604.6032	Training	Option 1	8,271,079	20,542,206	12,271,127
0604.6033	Information and Personnel Security	Option 1	8,404,946	18,575,630	10,170,684
0604.6034	Record Center	Option 1	7,802,523	14,391,158	6,588,634
0604.6035	Internal Communication	Option 1	(412,642)	134,969	547,611
0604.6036	Accounting, Treasury & Invoice Operations	Option 1	12,049,569	24,577,396	12,527,827
0604.6037	Asset Management	Option 1	359,916	359,715	(201)
0604.6038	Facility Management	Option 1	3,635,905	22,202,181	18,566,276
0604.6039	Facility - Mini-MAC Building	Option 1	-	123,501	123,501
0604.6042	PERC\$	Option 1	-	818,632	818,632
0604.6045	Gateway Project	Option 1	(20,000)	738,370	758,370
0604.6046	Shaw Nuclear Exchange	Option 1	20,000	-	(20,000)
0604.6047	Legal Expenses	Option 1	8,462,852	15,505,975	7,043,123
0604.6048	EMC Corporation Matter	Option 1	1,555	1,557	2
0604.6049	952.204-77 Comp Security	Option 1	873	699	(174)
0605.6040	Contract Management & Administration	Option 1	16,584,091	18,569,434	1,985,343
0606.6050	Procurement	Option 1	3,725,526	8,809,637	5,084,111
0606.6051	Infrastructure Procurement	Option 1	4,192,508	6,141,727	1,949,219
0606.6052	Construction Procurement	Option 1	5,389,184	14,836,392	9,447,208
0606.6053	Process Equipment Procurement	Option 1	8,811,049	16,683,838	7,872,789
0606.6054	Process Unit Procurement	Option 1	433,523	464,936	31,413

CB&I AREVA MOX Services, LLC.
MFFF Project Cost by Management Area

Schedule 6.1

Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
0606.6055	Property Management	Option 1	4,412,654	5,335,247	922,593
0606.6056	Employment Eligibility Verifications	Option 1	2,400	851	(1,549)
0606.6057	Engineered Equipment Group	Option 1	498,087	8,256,992	7,758,905
0606.6058	Procurement Corrective Action NRC Commercial Grade Dedication	Option 1	-	-	-
0606.6059	Procurement Support Services	Option 1	-	4,960,099	4,960,099
0606.6068	S&R and Warehouses	Option 1	-	31,678,298	31,678,298
0606.6069	Materials Management	Option 1	227,994	5,942,192	5,714,198
0607.6060	IT Support	Option 1	9,194,965	47,929,477	38,734,512
0607.6061	IT Other Direct Costs (ODCs)	Option 1	15,366,220	57,883,204	42,516,984
0607.6062	Team Center Initiative	Option 1	1,999,755	2,116,187	116,432
0611.6000	Project Office Operations	Option 1	-	833,463	833,463
0611.6001	Communications	Option 1	-	1,164,936	1,164,936
0611.6002	Special Projects	Option 1	-	1,270,591	1,270,591
0611.6004	Project Off-Site Operations	Option 1	-	1,224,027	1,224,027
0611.6005	Projects Oversight	Option 1	-	1,716,325	1,716,325
0611.6009	Relocations	Option 1	-	1,138,970	1,138,970
0611.6090	Project Systems Assessment - NNSA (OPC)	Option 1	500,002	239,770	(260,232)
0611.6091	EVMS Process Improvements Development ODC (OPC)	Option 1	-	18,475	18,475
0612.6010	Project Controls	Option 1	-	2,913,451	2,913,451
0614.6030	Program Support and Legal Administration	Option 1	-	4,555,007	4,555,007
0614.6031	Human Resources	Option 1	-	493,111	493,111
0614.6032	Training	Option 1	-	3,519,268	3,519,268
0614.6033	Materials Management	Option 1	-	-	-
0614.6034	Record Center	Option 1	-	1,300,316	1,300,316
0614.6036	Accounting, Treasury & Invoice Operations	Option 1	-	2,876,441	2,876,441
0614.6038	Facility Management	Option 1	-	1,507,135	1,507,135
0614.6047	Legal Expenses	Option 1	-	1,665,825	1,665,825
0615.6040	Contract Management & Administration	Option 1	-	2,043,913	2,043,913
0616.6050	Procurement	Option 1	-	721,704	721,704
0616.6051	Infrastructure Procurement	Option 1	-	532,976	532,976
0616.6052	Construction Procurement	Option 1	-	1,654,810	1,654,810
0616.6053	Process Equipment Procurement	Option 1	-	290,251	290,251
0616.6055	Property Management	Option 1	-	1,305,869	1,305,869
0616.6057	Engineered Equipment Group	Option 1	-	569,012	569,012
0616.6059	Procurement Support Services	Option 1	-	412,851	412,851
0616.6068	S&R and Warehouses	Option 1	-	1,319,145	1,319,145
0616.6069	Materials Management	Option 1	-	510,097	510,097

CB&I AREVA MOX Services, LLC.
MFFF Project Cost by Management Area

Schedule 6.1

Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
0617.6060	IT Support	Option 1	-	6,586,251	6,586,251
0617.6061	IT Other Direct Costs (ODCs)	Option 1	-	4,239,122	4,239,122
Subtotal MA 06			210,374,596	\$ 604,093,287	\$ 393,718,692
1000.8001	Management / Admin	Option 1	\$ 8,574,626	\$ 20,831,188	\$ 12,256,562
1000.8002	Engineering Services Project Controls	Option 1	3,588,904	9,548,015	5,959,111
1000.8003	Engineering Assurance	Option 1	2,053,124	8,647,662	6,594,538
1000.8004	Technical Coordination	Option 1	3,098,008	6,527,963	3,429,955
1000.8005	Document Management	Option 1	819,754	4,442,630	3,622,876
1000.8006	Engineering Training	Option 1	1,861,539	11,783,725	9,922,186
1000.8037	Mechanical – Construction Support	Option 1	-	-	-
1001.8011	Business Travel	Option 1	5,151,516	4,334,579	(816,937)
1001.8012	Temporary Assignments	Option 1	125,319	10,500,723	10,375,404
1001.8019	Other ODCs	Option 1	10,996,389	8,412,830	(2,583,559)
1002.8021	Supervision / Admin	Option 1	1,359,305	1,349,621	(9,684)
1002.8022	Chemical	Option 1	1,040,139	1,096,455	56,316
1002.8023	Mechanical	Option 1	1,073,193	106,284	(966,909)
1002.8024	Laboratory	Option 1	322,020	124,465	(197,555)
1002.8025	Balance of Plant (BOP)	Option 1	21,323	37,924	16,601
1002.8026	Safety	Option 1	458,506	152,758	(305,748)
1002.8027	Reference Plant Support	Option 1	256,244	134,197	(122,047)
1003.8031	Supervision / Admin	Option 1	4,178,071	5,538,007	1,359,936
1003.8032	Civil / Structural	Option 1	6,478,407	61,885,071	55,406,664
1003.8033	PUDC Procurement & Fabrication Support	Option 1	2,266,768	11,010,319	8,743,551
1003.8034	Electrical / I&C Site Construction Support	Option 1	13,887,592	55,419,699	41,532,107
1003.8035	Chemical-Construction Support	Option 1	7,706,043	26,282,420	18,576,377
1003.8036	Mechanical – Construction Support	Option 1	4,121,335	14,521,002	10,399,667
1003.8037	Plant Configuration Site Construction Support	Option 1	17,159,821	33,448,522	16,288,701
1003.8038	Engineering Mechanics - Site Construction Support	Option 1	2,689,234	22,219,149	19,529,915
1003.8042	Civil / Structural	Option 1	-	-	-
1004.8040	Responsible Engineer Process Unit Fabrication Support	Option 1	-	-	-
1004.8041	Supervision / Admin	Option 1	1,729,643	1,905,609	175,966
1004.8042	Civil / Structural	Option 1	1,876,517	1,474,971	(401,547)
1004.8043	PUDC Site Construction Support	Option 1	7,825,052	38,089,073	30,264,021
1004.8044	Electrical / I&C Procurement and Fabrication Support	Option 1	1,049,353	2,598,483	1,549,130
1004.8045	Software	Option 1	10,703,048	15,422,427	4,719,379
1004.8046	Chemical-Procurement/Fabrication Support	Option 1	6,300,379	22,677,366	16,376,987

CB&I AREVA MOX Services, LLC.
MFFP Project Cost by Management Area

Schedule 6.1

Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1004.8047	Mechanical – Procurement/Fabrication Support	Option 1	989,173	1,624,043	634,870
1004.8048	Plant Configuration - Construction, Procurement & Fabrication Support	Option 1	5,320,984	5,747,615	426,631
1004.8049	Equipment Qualification	Option 1	4,830,151	9,815,262	4,985,111
1005.8051	Supervision / Admin	Option 1	1,481,993	790,712	(691,281)
1005.8052	Mechanical – Startup & Operations Support	Option 1	5,301,191	489,505	(4,811,686)
1005.8053	Electrical / IC Startup and Operations Support	Option 1	7,232,791	3,112,993	(4,119,798)
1005.8054	Civil/ Structural Startup Support	Option 1	644,131	-	(644,131)
1005.8055	Engineering Mechanics Startup Support	Option 1	786,719	-	(786,719)
1005.8056	PUDC Startup Support	Option 1	6,351,227	19,280,579	12,929,352
1005.8057	Chemical/Mechanical Engineering Startup Support	Option 1	2,311,772	668,696	(1,643,076)
1005.8058	Software Modifications	Option 1	11,589,148	9,113	(11,580,035)
1005.8059	Plant Configuration	Option 1	4,033,678	-	(4,033,678)
1006.8001	Management / Admin ODC	Option 1	-	1,407,038	1,407,038
1006.8002	Project Controls OPC	Option 1	-	262,767	262,767
1006.8003	Engineering Assurance ODC	Option 1	-	446,932	446,932
1006.8005	Document Management	Option 1	-	169,402	169,402
1006.8006	Engineering Training	Option 1	-	131,226	131,226
1006.8011	Business Travel	Option 1	-	5,563	5,563
1006.8049	Engineering Mechanics	Option 1	-	925,155	925,155
1006.8052	Process Unit Responsible Engineer Startup Support	Option 1	-	3,949,689	3,949,689
1006.8053	Electrical / IC Startup Support	Option 1	-	3,540,890	3,540,890
1006.8054	Civil/ Structural Startup Support	Option 1	-	1,226,667	1,226,667
1006.8055	Engineering Mechanics Startup Support	Option 1	-	1,721,000	1,721,000
1006.8057	Chemical/ Mechanical Engineering Startup Support	Option 1	-	5,571,346	5,571,346
1006.8059	Plant Configuration	Option 1	-	1,136,403	1,136,403
1007.8071	Chemical Related Engineered Equipment	Option 1	-	-	-
1007.8072	Electrical Related Engineered Equipment	Option 1	-	-	-
1007.8073	Instrumentation & Control Related Engineered Equipment	Option 1	-	-	-
1007.8074	HVAC Related Engineered Equipment	Option 1	-	-	-
1007.8075	Miscellaneous Engineered Equipment	Option 1	-	-	-
Subtotal MA 10			\$ 179,644,130	\$ 462,555,733	\$ 282,911,603
1100.8101	Management / Administration	Option 1	\$ 1,553,652	\$ 2,438,108	\$ 884,456
1100.8102	NSA Project Controls	Option 1	1,106,575	1,586,135	479,560
1101.8111	Business Travel	Option 1	1,309,398	591,927	(717,471)
1101.8112	Temporary Assignments	Option 1	178,491	55,790	(122,701)
1101.8119	Other ODCs (Legal & S/C Costs)	Option 1	3,530,870	2,519,158	(1,011,712)

CB&I AREVA MOX Services, LLC.
MFFF Project Cost by Management Area

Schedule 6.1

Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1102.8121	Defense of Licensing Basis	Option 1	7,263,816	11,460,643	4,196,827
1102.8122	Compliance Program	Option 1	3,871,881	2,967,711	(904,170)
1102.8123	Condition Reports Work Resolution	Option 1	-	205,042	205,042
1103.8132	Chemical Safety Support	Option 1	4,188,383	6,063,257	1,874,874
1103.8133	Laboratory Support	Option 1	2,044,875	1,438,966	(605,909)
1104.8141	ES&H Program	Option 1	219,560	1,229,596	1,010,036
1104.8142	Radiological Protection	Option 1	13,298	5,869	(7,429)
1104.8143	Environmental Protection Program	Option 1	713,022	823,040	110,018
1104.8144	Industrial Safety Program	Option 1	380,343	638,299	257,956
1104.8145	Waste Management Program	Option 1	(50,533)	334,145	384,678
1104.8146	Fitness for Duty Program	Option 1	(216,463)	515,082	731,545
1104.8147	Emergency Response Program	Option 1	80,657	94,698	14,041
1104.8148	Employee Safety Incentive Program	Option 1	81,139	79,977	(1,162)
1104.8149	Construction - Safety Engineering Support	Option 1	233,618	459,000	225,382
1104.8151	Criticality Safety Procurement & Cons	Option 1	-	-	-
1105.8151	Criticality Safety Procurement & Const Support	Option 1	2,331,689	7,205,149	4,873,460
1105.8152	Criticality Safety Startup Support	Option 1	2,570,594	1,434,865	(1,135,729)
1105.8153	Criticality Safety Licensing Support	Option 1	2,971,399	2,046,062	(925,337)
1105.8154	Nuclear Radiation Protections	Option 1	3,145,818	5,028,696	1,882,878
1105.8155	Nuclear Radiation & Criticality Monitoring	Option 1	886,654	596,559	(290,095)
1105.8156	Emerg. Planning & Deactivation Design Spt.	Option 1	233,008	143,133	(89,875)
1106.8116	Integrated Safety Analysis	Option 1	-	-	-
1106.8161	Defense of the Safety Basis	Option 1	4,680,398	6,750,214	2,069,816
1106.8162	ISA Review of Design/Construction Modification	Option 1	2,793,633	2,831,117	37,484
1106.8164	Update the Safety Basis	Option 1	4,732,258	3,584,413	(1,147,845)
1106.8165	Support Update of the ISA Summary	Option 1	1,779,036	1,211,164	(567,872)
1109.8191	NRC Costs	Option 1	18,764,920	57,777,922	39,013,002
1109.8192	Physical Security Program	Option 1	79,356,300	15,133,967	(64,222,333)
1109.8193	Material Control & Accountability Program	Option 1	16,201,738	15,050,346	(1,151,392)
1109.8195	DOE/WSRC Costs	Option 1	-	-	-
1110.8101	Management / Administration	Option 1	-	226,869	226,869
1110.8102	Project Controls	Option 1	-	102,632	102,632
1112.8121	Defense of Licensing Basis	Option 1	-	1,524,420	1,524,420
1113.8132	Chemical Safety Support	Option 1	-	567,575	567,575
1115.8151	Criticality Safety Procurement & Const Support	Option 1	-	951,357	951,357
1115.8154	Nuclear Radiation Protections	Option 1	-	329,182	329,182
1116.8161	Defense of the Safety Basis	Option 1	-	493,859	493,859

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Schedule 6.1

Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
Subtotal MA 11			\$ 166,950,027	\$ 156,495,942	\$ (10,454,084)
1500.8501	Management / Admin	Option 1	\$ 23,522,195	\$ 63,202,558	\$ 39,680,363
1500.8502	Project Controls	Option 1	10,943,800	32,745,008	21,801,208
1500.8503	Quality Assurance	Option 1	749,625	484,283	(265,342)
1500.8504	ES&H	Option 1	2,719,758	694,576	(2,025,182)
1500.8506	Business	Option 1	1,451,888	4,061,850	2,609,963
1501.8511	Business Travel	Option 1	711,965	494,312	(217,653)
1501.8512	Temporary Assignments	Option 1	20,153	1,802,546	1,782,393
1501.8519	Project Controls	Option 1	-	-	-
1502.8521	Supervision / Admin	Option 1	-	-	-
1502.8522	Project Controls	Option 1	-	-	-
1502.8523	Quality Assurance	Option 1	-	-	-
1502.8524	ES&H	Option 1	-	-	-
1503.8531	Supervision / Admin	Option 1	-	-	-
1503.8532	Project Controls	Option 1	-	-	-
1503.8534	ES&H	Option 1	-	-	-
1504.8512	Temporary Assignments	Option 1	-	1,858	1,858
1504.8541	Supervision / Admin	Option 1	21,437,033	107,636,857	86,199,824
1504.8542	Work Control Group	Option 1	-	-	-
1505.8551	Supervision / Admin	Option 1	(41,922)	3,461,412	3,503,334
1505.8552	Project Controls	Option 1	-	-	-
1505.8554	ES&H	Option 1	-	-	-
Subtotal MA 15			\$ 61,514,495	\$ 214,585,261	\$ 153,070,766
1600.8601	Management / Admin	Option 1	\$ 2,710,032	\$ 9,826,376	\$ 7,116,344
1600.8602	Project Controls	Option 1	3,103,965	9,441,747	6,337,782
1600.8603	QA / QC	Option 1	100,762	88,152	(12,610)
1601.8611	Business Travel	Option 1	3,706,956	5,597,889	1,890,933
1602.8621	Supervision / Admin	Option 1	2,114,941	4,493,560	2,378,619
1603.8631	Supervision / Admin	Option 1	11,417,852	7,091,522	(4,326,329)
1603.8632	Job Living Expense	Option 1	-	418,575	418,575
1603.8641	Management / Admin	Option 1	(271,511)	-	271,511
1604.8641	Team Center Initiative	Option 1	271,511	315,244	43,733
1605.8645	CA - NRC/CGIE - PUDC Support	Option 1	-	5,663,563	5,663,563
1618.8748	PAD - Preplanning	Option 1	-	-	-
1618.8749	PAR - Preplanning	Option 1	-	-	-

CB&I AREVA MOX Services, LLC.
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Schedule 6.1

Cost Account	Cost Account Description	Contract	[A]		[B]		[C] = B - A	
			2007 Baseline		2012 Rebaseline with Addendum		Cost Growth	
1623.8785	Process Assembly Facilities	Option 1	28,909,318		33,434,879		4,525,561	
Subtotal MA 16			\$ 52,063,827		\$ 76,371,508		\$ 24,307,681	
1701.8701	KCB - Homogenization - Sampling	Option 1	\$ 1,934,236		\$ 6,458,691		\$ 4,524,455	
1701.8702	KCC - PuO2 Decanning	Option 1	1,924,402		4,993,127		3,068,725	
1701.8703	KDA - PUO2 Decanning	Option 1	3,627,549		19,430,268		15,802,719	
1701.8704	KDM - Pre-Polishing Milling	Option 1	9,462,891		32,784,460		23,321,569	
1701.8705	KDR - Recanning	Option 1	1,901,161		218,211		(1,682,950)	
1701.8706	KPA GB 4010	Option 1	1,004,520		2,531,529		1,527,009	
1701.8751		Option 1	-		-		-	
1701.8777	KPG - Sampling Automatic	Option 1	2,299,639		6,950,492		4,650,853	
1701.8795	Long Lead Procurements	Option 1	(2,786,631)		-		2,786,631	
1702.8707	KCB 5000 Manufacturing	Option 1	672,204		650,769		(21,435)	
1702.8708		Option 1	-		-		-	
1702.8709		Option 1	-		-		-	
1702.8710		Option 1	-		-		-	
1702.8711		Option 1	-		-		-	
1702.8712	VDR - Filter Dismantling	Option 1	1,768,495		61,433		(1,707,062)	
1702.8713	VDU - Maintenance & Mechanical Dismantling	Option 1	1,145,133		20,269		(1,124,864)	
1702.8714		Option 1	-		-		-	
1703.8715	DCM - PuO2 3013 Storage	Option 1	2,035,711		7,020,517		4,984,806	
1703.8716	DCP - PuO2 Receiving	Option 1	6,463,066		6,290,272		(172,794)	
1703.8717	KDA - PUO2 Decanning (EQ - 6000 Density Measurement)	Option 1	639,873		804,180		164,307	
1703.8718		Option 1	-		-		-	
1703.8719		Option 1	-		-		-	
1704.8720	SDK - Rod Inspection and Sorting	Option 1	2,941,521		2,373,011		(568,510)	
1704.8721	SEK - Helium Leak Test	Option 1	729,118		1,737,208		1,008,090	
1705.8722	GMK - Rod Tray Loading	Option 1	982,195		1,162,390		180,195	
1705.8723	SCE - Rod Scanning	Option 1	2,444,526		3,424,860		980,334	
1705.8724	SMK - Rod Tray Handling	Option 1	2,112,509		2,488,168		375,659	
1705.8725	STK - Rod Storage	Option 1	1,863,442		4,226,278		2,362,836	
1705.8726	SXE - X Ray Inspection	Option 1	2,095,947		2,365,417		269,470	
1705.8727	TAS - Assembly Handling and Storage	Option 1	1,113,247		9,358,223		8,244,976	
1705.8728	TCK - Assembly Dry Cleaning	Option 1	362,720		745,981		383,261	
1705.8729	TCL - Assembly Final Inspection	Option 1	2,008,889		1,275,021		(733,868)	
1705.8730	TGJ - Reserve Pit	Option 1	2,010,346		358,421		(1,651,925)	
1705.8731	TCP - Assembly Dimensional Inspection	Option 1	1,608,930		2,087,795		478,865	

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Schedule 6.1

Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1705.8732	TGM - Assembly Mockup Loading	Option 1	3,651,566	2,896,012	(755,554)
1705.8733	TGV - Assembly Mounting	Option 1	1,300,960	817,271	(483,689)
1706.8734	PSE - Green Pellet Storage	Option 1	2,995,385	7,725,288	4,729,903
1706.8735	PSF - Sintering Pellet Storage	Option 1	3,059,559	7,545,089	4,485,530
1706.8736	PSI - Scrap Pellet Storage	Option 1	2,962,771	8,326,080	5,363,309
1706.8737	PSJ - Ground & Sorted Pellet Storage	Option 1	3,013,168	8,700,651	5,687,483
1707.8738	Lab Equip - LRD/LPG/LBT/LAC/KLN/KLL/KLK/KLH	Option 1	5,107,852	9,269,740	4,161,888
1707.8739	Lab Equip - LME/LAU/FLT	Option 1	2,536,095	5,505,154	2,969,059
1707.8740	Lab Equip - LSR/LCP/KLJ	Option 1	6,615,656	10,858,433	4,242,777
1707.8741	Lab Equip - LPS/LET/LER/LDS/KLM/KLF/KLB/KLC/KLD	Option 1	6,827,803	13,008,455	6,180,652
1707.8742	Lab Equip - KLO/KLI/KLG/KLA/KLE	Option 1	7,139,421	10,325,401	3,185,980
1707.8743	Lab Equip - LSG/LLI	Option 1	419,067	641,331	222,264
1707.8744	Lab Equip - LFX	Option 1	1,409,182	2,368,710	959,528
1708.8745	DCE - PUO2 Buffer Storage	Option 1	2,172,985	11,862,545	9,689,560
1708.8746	GDE - Rod Decladding	Option 1	1,043,388	3,778,042	2,734,654
1708.8747	GME - Rod Cladding and Decontamination	Option 1	8,888,637	26,508,613	17,619,976
1708.8748	PAD - Preplanning	Option 1	594,028	2,114,547	1,520,519
1708.8749	PAR - Preplanning	Option 1	555,296	2,046,442	1,491,146
1708.8750	PML - Pellet Handling	Option 1	6,826,152	26,530,210	19,704,058
1708.8751	PQE - Quality Control & Manual Sorting	Option 1	3,300,657	7,432,755	4,132,098
1708.8752	PRE - Pellet Grinding	Option 1	2,839,088	7,040,991	4,201,903
1708.8753	PRF - Pellet Grinding	Option 1	2,839,088	6,926,812	4,087,724
1708.8754	PTE - Pellet Inspection & Sorting	Option 1	1,222,670	5,806,075	4,583,405
1708.8755	PTF - Pellet Inspection & Sorting	Option 1	1,216,910	5,693,786	4,476,876
1709.8756	DDP - UO2 Drum Emptying	Option 1	1,261,619	2,858,233	1,596,614
1709.8757	LCT - Test Line (part of laboratory)	Option 1	2,615,834	3,074,651	458,817
1709.8758	NBX - Primary Blend Ball Milling	Option 1	1,399,068	3,817,183	2,418,115
1709.8759	NBY - Scrap Ball Milling	Option 1	1,399,068	3,233,671	1,834,603
1709.8760	NCR - Scrap Processing	Option 1	5,294,395	9,035,233	3,740,838
1709.8761	NDD - PUO2 Can Receiving and Emptying	Option 1	1,578,425	3,803,765	2,225,340
1709.8762	NDP - Primary Dosing	Option 1	4,193,563	12,177,516	7,983,953
1709.8763	NDS - Final Dosing	Option 1	5,122,007	15,225,662	10,103,655
1709.8764	NTM - Jar Storage and Handling	Option 1	6,716,574	27,061,590	20,345,016
1709.8765	NXR - Powder Auxiliary	Option 1	2,022,419	6,940,680	4,918,261
1710.8766	NPG - Homogenization & Pelletizing	Option 1	3,917,028	14,407,626	10,490,598
1710.8767	NPH - Homogenization & Pelletizing	Option 1	3,862,290	13,959,131	10,096,841
1710.8768	NPI - Homogenization & Pelletizing	Option 1	3,873,576	2,312,137	(1,561,439)

CB&I AREVA MOX Services, LLC.
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Schedule 6.1

Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1711.8769	KLA - Precipitation - Filtration - Oxidation	Option 1	2,345,151	8,520,845	6,175,694
1711.8770	KCB GB1000 - Homogenization - Sampling	Option 1	964,252	2,679,741	1,715,489
1711.8771	KDA - PUO2 Decanning	Option 1	404,974	998,491	593,517
1711.8772	KDB - Dissolution	Option 1	2,539,799	9,591,887	7,052,088
1711.8773	KDD - Dissolution of Chlorinated Feed	Option 1	4,764,685	20,578,565	15,813,880
1711.8774	KDM - Pre-Polishing Milling (GB6400/7400)	Option 1	786,781	1,380,592	593,811
1711.8775	KPA GB4000	Option 1	1,928,637	3,378,746	1,450,109
1711.8776	KPB GB1000	Option 1	681,155	1,777,821	1,096,666
1711.8777	KPG - Sampling Automatic	Option 1	-	55,253	55,253
1711.8778	LLP - Pneumatic Transfer (33mm, PUO2 cans) Equipment	Option 1	2,315,566	6,852,035	4,536,469
1711.8779	LTP - Pneumatic Transfer (76mm, PUO2 cans) Equipment	Option 1	1,080,507	4,405,665	3,325,158
1711.8780	NTP - Pneumatic Transfer (133mm, PUO2 cans) Equipment	Option 1	1,947,379	6,673,608	4,726,229
1712.8781	NPP - Additives Preparation	Option 1	1,430,363	1,161,650	(268,713)
1712.8782	PFE/PFF - Sintering Furnace	Option 1	24,950,333	71,472,962	46,522,629
1712.8783	TXE - Assembly Packaging	Option 1	1,051,357	1,484,577	433,220
1712.8784	DRS - UO2 Receiving and Storage	Option 1	152,633	-	(152,633)
1712.8786	PFF - Sintering Furnace	Option 1	4	-	(4)
1713.8790	Process Unit Support	Option 1	2,519,533	6,239,241	3,719,708
1713.8791	Assembly Suspense Accounts	Option 1	-	-	-
1714.8708	KCD - Oxalic Mother Liquors Recovery Unit	Option 1	857,872	742,665	(115,207)
1714.8709	KPA (GB2000, 2010, 3000, 8000, 8510) Purification Cycle	Option 1	1,955,668	3,273,958	1,318,290
1714.8710	KPC - Nitric Acid Recovery Liquid Ring Pump GB	Option 1	915,063	769,481	(145,582)
1714.8711	KWD - Aqueous Waste Reception	Option 1	1,260,032	1,276,827	16,795
1714.8714	KPB (GB2000) Solvent Recovery Unit	Option 1	406,920	564,199	157,279
1715.8716	DCP - PuO2 Receiving	Option 1	-	157,000	157,000
1715.8718	VDQ Waste Storage	Option 1	3,069,408	639	(3,068,769)
1715.8719	VDT Waste Nuclear Count - Drum Hdling & NDA P	Option 1	889,899	4,468,007	3,578,108
1716.8791	Assembly BOAs Accounts	Option 1	10,629,229	50,274,011	39,644,782
1716.8795	Long Lead Procurements	Option 1	16,050,885	49,105,674	33,054,789
1716.8796	ATG Spares Procurements	Option 1	4,825,240	5,187,473	362,233
1717.8792	Self-Perform Suspense Accounts	Option 1	318,024	726,190	408,166
1717.8793	Design Modifications	Option 1	-	373,013	373,013
1717.8797	Unexpected Outsource Costs	Option 1	-	192,886	192,886
1717.8798	Duty and Shipping Costs	Option 1	-	2,461,227	2,461,227
1717.8799	REA Exposure	Option 1	-	-	-
1717.87MA	Maintenance Program, Layup/In-Storage	Option 1	-	340,078	340,078
1721.2101	Site Preparation	Option 1	29,136,316	29,492,485	356,169

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Schedule 6.1

Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1722.2201	Roads & Parking	Option 1	1,853,353	1,770,466	(82,887)
1722.2202	F" Road"	Option 1	5,529,770	3,767,924	(1,761,846)
1723.2301	Yard Structures	Option 1	2,222,753	3,861,339	1,638,586
1723.2501		Option 1	-	-	-
1724.2401	Underground Utilities	Option 1	10,809,194	21,315,647	10,506,454
1725.2501	Yard Fire Protection	Option 1	2,374,082	3,091,847	717,765
1726.2601	Chillers	Option 1	3,996,349	6,597,688	2,601,339
1727.2701	Site Security and Perimeter Intrusion Detection and Assessment Syste	Option 1	33,756,358	46,557,859	12,801,501
1728.2801	Yard Electrical & Lighting	Option 1	6,479,079	6,076,996	(402,083)
1729.2901	Landscaping	Option 1	438,164	334,321	(103,843)
1731.3150	Administration Building	Option 1	8,158,478	11,047,671	2,889,193
1732.3250	Receiving Warehouse Building	Option 1	2,342,535	1,257,230	(1,085,305)
1732.3550	Standby Diesel Generator Building	Option 1	1	-	(1)
1733.3350	Secured Warehouse Building	Option 1	3,768,379	4,429,712	661,333
1734.3450	Tech Support & Access Control Building	Option 1	7,129,799	20,551,164	13,421,365
1735.3550	Standby Diesel Generator Building	Option 1	3,573,745	-	(3,573,745)
1735.3556	Standby Diesel Generator System/Equip.	Option 1	-	-	-
1736.3652	Civil / Structural / Architectural	Option 1	1,234,783	12,694,518	11,459,735
1736.3653	Mechanical / Piping	Option 1	1,519,602	5,681,459	4,161,857
1736.3654	Electrical	Option 1	2,419,944	12,245,457	9,825,513
1736.3655	I&C	Option 1	386,727	672,465	285,738
1736.3656	Emerg.Diesel Gen.System/Equipment	Option 1	7,797,805	10,668,334	2,870,529
1737.3751	MFFF Construction - Installation/Materials	Option 1	1,400,000	3,061,059	1,661,059
1737.3752	Civil / Structural / Architectural	Option 1	1,852,989	2,335,417	482,428
1737.3753	Mechanical / Piping	Option 1	7,584,611	2,577,658	(5,006,953)
1737.3754	Electrical	Option 1	3,535,409	916,676	(2,618,733)
1737.3755	I&C	Option 1	5,243,898	58,855	(5,185,043)
1737.3756	Reagent Systems Equipment / Piping	Option 1	824,061	9,741,737	8,917,676
1741.4100	Building Structure	Option 1	42,141,101	48,980,823	6,839,722
1741.4110	Architectural Features	Option 1	1,286,559	12,573,673	11,287,114
1741.4120	HVAC	Option 1	5,143,021	36,376,411	31,233,390
1741.4130	MOX Processing Area (BMP) – MOX Processing Area – Level 1 – Fire Pro	Option 1	5,210,678	12,698,949	7,488,272
1741.4140	Utility Equipment & Piping	Option 1	4,467,807	2,083,905	(2,383,902)
1741.4150	Process Piping	Option 1	14,137,249	17,941,478	3,804,229
1741.4170	Other Equipment	Option 1	7,913,483	7,094,780	(818,703)
1741.4180	Electrical	Option 1	12,710,594	47,210,472	34,499,878
1741.4190	Instrumentation	Option 1	13,114,418	2,734,549	(10,379,870)

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Schedule 6.1

Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1742.4200	Building Structure	Option 1	22,770,514	35,620,852	12,850,338
1742.4210	Architectural Features	Option 1	(191,335)	4,607,399	4,798,734
1742.4220	HVAC	Option 1	7,638,103	20,971,266	13,333,163
1742.4230	MOX Processing Area (BMP) – MOX Processing Area – Level 2 – Fire Pro	Option 1	6,021,572	14,596,534	8,574,962
1742.4240	Utility Equipment & Piping	Option 1	1,220,714	42,641	(1,178,073)
1742.4250	Process Piping	Option 1	7,971,156	11,361,603	3,390,447
1742.4270	Other Equipment	Option 1	2,454,660	2,570,349	115,689
1742.4280	Electrical	Option 1	14,912,858	29,359,393	14,446,535
1742.4290	Instrumentation	Option 1	7,707,535	1,728,847	(5,978,688)
1742.4600	Fuel Assembly / Rods	Option 1	(167)	-	167
1743.4300	Building Structure	Option 1	-	28,748,394	28,748,394
1743.4310	Architectural Features	Option 1	215,717	5,178,527	4,962,810
1743.4320	HVAC	Option 1	15,793,051	36,243,152	20,450,100
1743.4330	MOX Processing Area (BMP) – MOX Processing Area – Level 3 – Fire Pro	Option 1	6,408,576	9,592,492	3,183,916
1743.4340	Utility Equipment & Piping	Option 1	1,757,160	104,868	(1,652,292)
1743.4350	Process Piping	Option 1	14,311,410	14,276,183	(35,227)
1743.4370	Other Equipment	Option 1	114,045	1,178,593	1,064,548
1743.4380	Electrical	Option 1	14,716,737	33,580,847	18,864,110
1743.4390	Instrumentation	Option 1	18,198,930	19,678,197	1,479,267
1744.4400	Building Structure	Option 1	837,780	12,198,268	11,360,488
1744.4410	Architectural Features	Option 1	79,148	-	(79,148)
1744.4420	HVAC	Option 1	353,456	2,882,398	2,528,942
1744.4430	MOX Processing Area (BMP) – MOX Processing Area – Level 4 – Fire Pr	Option 1	249,976	83,530	(166,446)
1744.4440	Utility Equipment & Piping	Option 1	581,867	610,698	28,831
1744.4480	Electrical	Option 1	78,559	946,936	868,377
1744.4490	Instrumentation	Option 1	(39,748)	52,684	92,432
1745.4500	MP Dismantling Units	Option 1	-	-	-
1745.4510	MP Receiving & Storage Units	Option 1	-	-	-
1745.4520	MP Ball Milling & Pneumatic Transfers	Option 1	-	-	-
1745.4530	MP Sintering Furnances	Option 1	1,133,724	-	(1,133,724)
1745.4540	MP Powder & Pellets	Option 1	-	-	-
1745.4550	MP Pellet Storage	Option 1	-	-	-
1745.4570	MP Rods & Assemblies	Option 1	-	-	-
1745.4580	MP Assembly Packaging Crane	Option 1	-	-	-
1745.4590	MP Laboratories	Option 1	-	-	-
1746.4600	Fuel Assembly / Rods	Option 1	4,898,683	4,513,528	(385,155)
1746.4610	Powder & Pellets	Option 1	18,241,062	13,852,934	(4,388,128)

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Schedule 6.1

Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1746.4620	Furnaces & Pellet Storage	Option 1	3,989,918	3,217,081	(772,837)
1746.4630	PuO2 Receiving, Storage & Decanning	Option 1	3,434,938	1,593,800	(1,841,138)
1746.4640	Labs & Testing	Option 1	36,210,885	35,673,183	(537,702)
1751.5100	Building Structure	Option 1	18,030,779	21,310,875	3,280,096
1751.5110	Architectural Features	Option 1	205,275	7,294,497	7,089,222
1751.5120	HVAC	Option 1	2,289,145	8,716,658	6,427,513
1751.5130	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 1 –	Option 1	1,247,530	1,801,582	554,052
1751.5140	Utility Equipment & Piping	Option 1	3,277,473	1,933,426	(1,344,046)
1751.5150	Process Piping & Equipment	Option 1	20,664,387	63,273,713	42,609,326
1751.5170	Other Equipment	Option 1	998,403	2,006,893	1,008,490
1751.5180	Electrical	Option 1	2,199,273	17,201,810	15,002,537
1751.5190	Instrumentation	Option 1	2,886,311	776,284	(2,110,026)
1751.5250		Option 1	-	-	-
1751.5700		Option 1	-	-	-
1752.5200	Building Structure	Option 1	5,326,583	9,451,743	4,125,160
1752.5210	Architectural Features	Option 1	(11,660)	1,248,731	1,260,391
1752.5220	HVAC	Option 1	3,076,650	5,815,594	2,738,943
1752.5230	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 2 –	Option 1	772,172	1,481,053	708,881
1752.5240	Utility Equipment & Piping	Option 1	799,083	668,407	(130,676)
1752.5250	Process Piping & Equipment	Option 1	22,325,326	103,387,615	81,062,289
1752.5270	Other Equipment	Option 1	1,739,491	451,468	(1,288,023)
1752.5280	Electrical	Option 1	4,274,729	14,240,247	9,965,518
1752.5290	Instrumentation	Option 1	3,457,434	979,949	(2,477,485)
1753.5300	Building Structure	Option 1	7,043,044	18,004,541	10,961,497
1753.5310	Architectural Features	Option 1	(7,882)	1,752,632	1,760,514
1753.5320	HVAC	Option 1	2,842,768	5,006,959	2,164,191
1753.5330	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 3 –	Option 1	803,128	1,850,451	1,047,323
1753.5340	Utility Equipment & Piping	Option 1	570,699	240,601	(330,098)
1753.5350	Process Piping & Equipment	Option 1	12,311,041	15,128,246	2,817,205
1753.5370	Other Equipment	Option 1	6,140	729,933	723,793
1753.5380	Electrical	Option 1	8,088,441	16,393,472	8,305,031
1753.5390	Instrumentation	Option 1	4,125,471	1,390,017	(2,735,454)
1754.5400	Building Structure	Option 1	-	5,868,741	5,868,741
1754.5410	Architectural Features	Option 1	27,732	1,700,960	1,673,228
1754.5420	HVAC	Option 1	2,895,119	4,469,887	1,574,769
1754.5430	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 4 –	Option 1	987,070	2,143,927	1,156,857
1754.5440	Utility Equipment & Piping	Option 1	1,509,067	1,364,002	(145,065)

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Schedule 6.1

Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1754.5450	Process Piping & Equipment	Option 1	10,269,733	15,901,164	5,631,431
1754.5470	Other Equipment	Option 1	585,252	503,476	(81,776)
1754.5480	Electrical	Option 1	4,732,941	16,215,664	11,482,723
1754.5490	Instrumentation	Option 1	7,283,214	814,419	(6,468,795)
1754.5540	Utility Equipment & Piping	Option 1	2,231	-	(2,231)
1755.5500	Building Structure	Option 1	-	10,560,583	10,560,583
1755.5510	Architectural Features	Option 1	130,702	2,112,694	1,981,992
1755.5520	HVAC	Option 1	3,234,191	9,439,141	6,204,950
1755.5530	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 5 –	Option 1	1,653,686	1,390,009	(263,677)
1755.5540	Utility Equipment & Piping	Option 1	2,235,565	2,042,028	(193,537)
1755.5550	Process Piping & Equipment	Option 1	12,301,514	9,663,694	(2,637,820)
1755.5570	Other Equipment	Option 1	353,332	213,102	(140,230)
1755.5580	Electrical	Option 1	3,703,393	13,361,396	9,658,003
1755.5590	Instrumentation	Option 1	13,320,716	15,438,044	2,117,327
1756.5600	Building Structure	Option 1	6,165,298	5,340,300	(824,998)
1756.5670	Other Equipment	Option 1	3,829,080	-	(3,829,080)
1756.5680	Electrical	Option 1	-	187,169	187,169
1756.5690	Instrumentation	Option 1	-	10,436	10,436
1757.5700	AP Chemical Units	Option 1	-	-	-
1757.5720	AP Mechanical Units	Option 1	-	-	-
1757.5730	PAF	Option 1	-	35,808	35,808
1758.5810	Mechanical Systems	Option 1	12,540,902	11,156,856	(1,384,046)
1758.5850	Chemical Systems	Option 1	2,438,555	7,082,040	4,643,485
1761.6100	Building Structure	Option 1	18,229,486	21,483,846	3,254,360
1761.6110	Architectural Features	Option 1	2,028,305	4,960,379	2,932,074
1761.6120	HVAC	Option 1	1,435,517	4,364,621	2,929,105
1761.6130	Shipping and Receiving Area (BSR) – Shipping and Receiving Area – Le	Option 1	1,605,863	1,443,333	(162,529)
1761.6140	Utility Equipment & Piping	Option 1	1,406,932	948,598	(458,335)
1761.6150	Process Piping	Option 1	330,741	1,199,682	868,941
1761.6170	Other Equipment	Option 1	258,851	358,450	99,599
1761.6180	Electrical	Option 1	9,717,335	9,076,335	(641,000)
1761.6190	Instrumentation	Option 1	468,092	1,093,509	625,417
1762.6200	Building Structure	Option 1	6,002,734	11,030,640	5,027,906
1762.6210	Architectural Features	Option 1	35,534	808,993	773,459
1762.6220	HVAC	Option 1	2,833,861	7,875,915	5,042,054
1762.6230	Shipping and Receiving Area (BSR) – Shipping and Receiving Area – Le	Option 1	1,254,324	1,448,395	194,071
1762.6240	Utility Equipment & Piping	Option 1	107,201	20,100	(87,101)

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Schedule 6.1

Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1762.6250	Process Piping	Option 1	186,238	311,367	125,129
1762.6270	Other Equipment	Option 1	-	34,875	34,875
1762.6280	Electrical	Option 1	2,433,971	5,336,801	2,902,830
1762.6290	Instrumentation	Option 1	120,382	334,483	214,102
1763.6300	Building Structure	Option 1	-	5,600,636	5,600,636
1763.6310	Architectural Features	Option 1	477,402	1,669,516	1,192,114
1763.6320	HVAC	Option 1	2,563,310	7,568,000	5,004,690
1763.6330	Shipping and Receiving Area (BSR) – Shipping and Receiving Area – Le	Option 1	1,755,869	1,659,212	(96,657)
1763.6340	Utility Equipment & Piping	Option 1	146,215	58,334	(87,881)
1763.6350	Process Piping	Option 1	45,070	863,815	818,745
1763.6370	Other Equipment	Option 1	7,331	105,520	98,189
1763.6380	Electrical	Option 1	1,079,778	8,730,876	7,651,098
1763.6390	Instrumentation	Option 1	1,591,341	1,779,241	187,901
1764.6400	Building Structure	Option 1	-	3,072,441	3,072,441
1764.6470	Other Equipment	Option 1	6,602	-	(6,602)
1764.6480	Electrical	Option 1	-	186,341	186,341
1764.6490	Instrumentation	Option 1	-	10,457	10,457
1771.7100	Building Structure	Option 1	7,436,315	8,425,791	989,476
1771.7110	Architectural Features	Option 1	7,146,295	1,420,056	(5,726,239)
1771.7120	HVAC	Option 1	927,006	4,359,752	3,432,746
1771.7130	Fire Protection	Option 1	2,988	-	(2,988)
1771.7140	Utility Equipment & Piping	Option 1	8,055	35,057	27,002
1771.7170	Other Equipment	Option 1	328	-	(328)
1771.7180	Electrical	Option 1	3,131,063	1,682,127	(1,448,936)
1771.7190	Instrumentation	Option 1	231,865	86,625	(145,240)
1772.7200	Building Structure	Option 1	25,824,745	39,222,116	13,397,371
1772.7210	Architectural Features	Option 1	1,068,385	31,026,898	29,958,513
1772.7270	Other Equipment	Option 1	274,440	113,238	(161,202)
1772.7280	Electrical	Option 1	1,039,438	1,091,331	51,893
1774.7401	Subcontractor Project Management/Project Controls	Option 1	6,598,306	72,846,805	66,248,499
1774.7402	Subcontractor Project Administration/Accounting	Option 1	-	-	-
1774.7403	Subcontractor Quality Assurance / Quality Control	Option 1	-	-	-
1774.7404	Subcontractor Environmental, Safety and Health	Option 1	-	3	3
1774.7405	Subcontractor Home Office Support	Option 1	-	-	-
1774.7406	Subcontractor Mobilization	Option 1	437,300	859,829	422,528
1774.7407	Subcontractor Demobilization	Option 1	26,800	580,131	553,331
1774.7408	Dewatering, Erosion and Sedimentation Control	Option 1	176,470	176,470	(0)

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MFFF Project Cost by Management Area

Schedule 6.1

Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1774.7409	Equipment Rental (Including Vehicles)	Option 1	2,356,013	20,944,738	18,588,725
1774.7410	Miscellaneous Procured Services	Option 1	225,600	1,447,138	1,221,538
1774.7411	Consumables and Expendable Materials	Option 1	775,267	4,263,877	3,488,610
1774.7412	Performance Bond	Option 1	871,448	1,107,034	235,586
1774.7413	Tools	Option 1	196,633	387,367	190,734
1774.7414	Craft Distributable and Indirect Costs	Option 1	3,766,887	14,124,171	10,357,284
1774.7415	Concrete Batch Plant	Option 1	3,778,207	3,778,185	(22)
1774.7416	Independent Test Lab	Option 1	1,018,992	1,887,424	868,432
1774.7417	NDE Testing	Option 1	874,858	904,226	29,368
1774.7418	Craft Support for MFFF Construction	Option 1	1,445,077	23,870,675	22,425,598
1774.7419	Construction Distributables - Misc	Option 1	8,997,911	44,517,380	35,519,469
1774.7420	Bulk Cable for MFFF Construction	Option 1	10,123,467	36,510,224	26,386,757
1774.7421	Electrical Connectors for MFFF Construction	Option 1	-	-	-
1774.7422	Electric Glove Box Penetrations for MFFF Construction	Option 1	-	-	-
1774.7424	Distributables - Bulk Commodity - HVAC	Option 1	16,844,578	17,545,355	700,777
1774.7427	Rebar MFFF Construction	Option 1	-	59,420	59,420
1774.7428	Civil/Structural Material	Option 1	12,784,971	44,341,502	31,556,531
1774.7429	Distributables - Bulk Commodity - Stainless Steel Ball Valves	Option 1	17,659,657	17,088,381	(571,276)
1774.7430	Distributable - Bulk Commodity Account - Chillers	Option 1	2,428,798	2,321,091	(107,707)
1774.7431	Bulk Commodity - Fans	Option 1	-	-	-
1774.7432	Electrical Material and Other Miscellaneous Labor Acct	Option 1	15,115,366	81,807,066	66,691,700
1774.7433	Instrumentation & Controls Material	Option 1	97,473,686	73,807,772	(23,665,914)
1774.7434	Chemical Equipment	Option 1	-	9,905,742	9,905,742
1774.7435	Distributables - HVAC Equipment	Option 1	7,046,692	92,131,147	85,084,455
1774.7436	Suspense Account - Process Equipment	Option 1	-	36,697	36,697
1774.7438	Mechanical Equipment	Option 1	54,802,155	143,942,463	89,140,308
1774.7439	Consumable & Expendable Materials Specific to CP-27 – BAP Chemical P	Option 1	1,584,469	37,778,832	36,194,363
1774.7440	Support Building for the Fabrication of Supports on Site Specific to	Option 1	-	39,366,963	39,366,963
1774.7441	BRP Distributables	Option 1	-	481,143	481,143
1774.7442	Craft Labor for Non-Discipline Specific Scope	Option 1	-	7,070,939	7,070,939
1774.7445	Craft Orientation & Training	Option 1	-	3,113,237	3,113,237
1774.7446	MOX Construction Back Charges	Option 1	-	-	-
1774.7453	Craft Orientation & Training	Option 1	-	125,868	125,868
1774.7454	Bulk Procurement - Material	Option 1	-	253,976	253,976
1774.7455	Distributable - Subcontract	Option 1	-	750,385	750,385
1775.7501	Batch Plant Capital Cost	Option 1	-	-	-
1775.7502	Batch Plant Operations	Option 1	-	0	0

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Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1775.7503	Batch Plant Concrete Materials	Option 1	-	(0)	(0)
Subtotal MA 17			\$ 1,328,934,157	\$ 2,902,768,004	\$ 1,573,833,847
1802.8820	Supplies & Services	Option 1	\$ 354,576	\$ 2,167,694	\$ 1,813,118
1802.8821	Office Equipment, Furniture Leases & Purchases	Option 1	2,924,041	4,278,754	1,354,713
1803.8830	Temporary Site Features & Services	Option 1	128,086	518,980	390,894
1803.8832	Buildings Shops / Trailers	Option 1	15,839,261	22,521,397	6,682,136
1803.8833	Utilities & Services	Option 1	14,684,284	45,585,905	30,901,621
1803.8850	Misc Field Construction Supplies	Option 1	-	-	-
1804.8840	Equipment	Option 1	12,689,446	43,706,780	31,017,334
1804.8842	Construction Materials Management	Option 1	209,481	5,794,327	5,584,846
1804.8843	Tools	Option 1	223,651	754,407	530,756
1804.8850	Temporary Site Features & Services	Option 1	-	-	-
1805.8850	Miscellaneous Field Supplies & Services	Option 1	17,474,277	72,941,704	55,467,427
1805.8851	Foreign National Escorts	Option 1	3,240,702	-	(3,240,702)
Subtotal MA 18			\$ 67,767,805	\$ 198,269,948	\$ 130,502,143
1901.6017	Human Performance Improvement Program	Option 1	\$ -	\$ 162,906	\$ 162,906
1901.6018	QA/QC - JLE/LTTA	Option 1	-	-	-
1901.6020	QA Program Management & Administration	Option 1	3,211,818	12,989,851	9,778,033
1901.6021	Quality Engineering	Option 1	4,758,444	24,010,181	19,251,737
1901.6022	Audit & Surveillance	Option 1	1,318,214	13,036,397	11,718,183
1901.6023	Quality Control Projects	Option 1	4,652,064	78,946,499	74,294,435
1901.6024	QA & QC Assembly GS	Option 1	1,716,727	4,392,446	2,675,719
1901.6025	MOX Potential Back Charges	Option 1	-	399	399
1901.6026	QA/QC Subcontractors	Option 1	300,000	256,791	(43,209)
1901.6027	Testing & Inspection QA/QC	Option 1	3,776,738	22,121,449	18,344,711
1901.6028	Commercial Grade Dedication	Option 1	-	54,273	54,273
1901.6029	Regulatory Compliance	Option 1	720,511	5,147,845	4,427,334
1901.9003	Quality Engineering	Option 1	1,353,049	-	(1,353,049)
1901.9503	Quality Engineering	Option 1	-	-	-
1902.6017	Human Performance Improvement Program	Option 1	-	10,204	10,204
1902.6020	QA Program Management & Administration	Option 1	-	1,809,790	1,809,790
1902.6021	Quality Engineering	Option 1	-	1,277,372	1,277,372
1902.6022	Audit & Surveillance	Option 1	-	1,270,862	1,270,862
1902.6023	Quality Control Projects	Option 1	-	2,036,800	2,036,800
1902.6026	QA/QC Subcontractors	Option 1	-	22,215	22,215

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Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1902.6027	Testing & Inspection QA/QC	Option 1	-	349,467	349,467
1902.6029	Regulatory Compliance	Option 1	-	983,821	983,821
1902.9503	Quality Engineering	Option 1	1,215,489	-	(1,215,489)
Subtotal MA 19			\$ 23,023,054	\$ 168,879,568	\$ 145,856,514
2000.9001	Management / Administration	Option 1	\$ 11,099,584	\$ 12,719,516	\$ 1,619,932
2000.9002	Project Controls	Option 1	2,776,133	1,844,714	(931,419)
2000.9003	Quality Assurance	Option 1	-	-	-
2000.9004	Environment, Safety & Health	Option 1	-	-	-
2001.9011	Business Travel	Option 1	2,753,497	1,049,346	(1,704,151)
2001.9012	Temporary Assignments	Option 1	2,111,832	71,116	(2,040,716)
2001.9014	Test Equipment & Consumables	Option 1	14,911,902	3,837,602	(11,074,300)
2001.9017	Spare Parts	Option 1	3,961,181	385,458	(3,575,723)
2002.9021	Generic Test Documents	Option 1	1,853,126	1,643,871	(209,255)
2002.9022	Validation Plans	Option 1	8,423,068	1,059,587	(7,363,481)
2002.9023	General Test Programs	Option 1	1,764,832	2,380,380	615,548
2002.9024	Technical Support	Option 1	3,217,683	2,628,695	(588,988)
2002.9026	Cold Startup Training	Option 1	2,567,004	1,366,887	(1,200,117)
2002.9527	Generic Test Documents	Option 1	-	-	-
2003.9011	Generic Test Documents	Option 1	-	-	-
2003.9031	In-Advance Tests in U.S.	Option 1	8,731,119	8,577,404	(153,715)
2003.9032	In-Advance Tests in Europe	Option 1	3,929,344	2,238,999	(1,690,345)
2004.9041	Aqueous Polishing	Option 1	26,892,156	17,121,299	(9,770,858)
2004.9042	MOX Process	Option 1	23,517,959	21,675,945	(1,842,014)
2004.9043	Balance of Plant	Option 1	19,879,489	15,238,873	(4,640,616)
2004.9044	Reaction to General Incident (RGI)	Option 1	3,827,814	2,529,087	(1,298,727)
2004.9047	Turnover & Logistics	Option 1	13,498,496	2,852,716	(10,645,780)
2004.9048	Laboratory - IPT	Option 1	-	8,094,707	8,094,707
2004.9049	Process Control - IPT	Option 1	-	7,939,498	7,939,498
2005.9051	SU In-Advance Tests Rework and Modifications in US	Option 1	-	176,629	176,629
2006.9060	Maintenance Program, Layup/In-Storage	Option 1	-	4,473,849	4,473,849
2007.9071	MOX IPT Rework	Option 1	-	34,495,693	34,495,693
2010.9101	Management / Administration - IPT	Option 1	-	31,409,273	31,409,273
2010.9102	Project Controls - IPT	Option 1	-	4,389,193	4,389,193
2010.9103	Program Support for Start-up	Option 1	-	3,425,955	3,425,955
2011.9111	Business Travel - IPT	Option 1	-	310,955	310,955
2011.9112	Generic Test Documents	Option 1	-	-	-

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Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
2011.9114	Test Equipment & Consumables - IPT	Option 1	-	11,050,555	11,050,555
2011.9117	Spare Parts - IPT	Option 1	-	3,630,728	3,630,728
2012.9124	Technical Support - IPT	Option 1	-	2,299,157	2,299,157
2012.9126	Cold Startup Training - IPT	Option 1	-	6,130,662	6,130,662
Subtotal MA 20			\$ 155,716,219	\$ 217,048,349	\$ 61,332,130
2100.9501	Management / Administration	Option 1	\$ 22,539,333	\$ 22,482,010	\$ (57,323)
2100.9502	Project Controls	Option 1	3,957,266	4,341,736	384,470
2100.9503	Quality Assurance	Option 1	-	-	-
2100.9504	Environment, Safety & Health	Option 1	-	-	-
2100.9506	PS&A	Option 1	(0)	-	0
2101.9511	Business Travel	Option 1	2,134,842	2,028,587	(106,255)
2101.9512	Temporary Assignments	Option 1	3,183,717	6,462,252	3,278,535
2101.9515	Consumables	Option 1	-	2,438,200	2,438,200
2101.9518	Software	Option 1	4,114,132	3,954,314	(159,818)
2102.9522	Training at Richland	Option 1	2,863,086	1,182,981	(1,680,105)
2102.9523	Training at LaHague	Option 1	48,189,683	3,675,088	(44,514,595)
2102.9524	Training at Melox	Option 1	64,791,905	5,648,433	(59,143,472)
2102.9525	Other Training	Option 1	66,704,236	85,723	(66,618,513)
2102.9526	Operations Activities	Option 1	(1,222,760)	157,198	1,379,958
2102.9527	Operations Process Simulator	Option 1	8,646,253	1,584,317	(7,061,936)
2102.9528	Reference Plant Training Direct Costs	Option 1	(8,646,253)	108,059,327	116,705,580
2103.9531	Organizational Documents	Option 1	1,141,455	4,215,983	3,074,528
2103.9532	Laboratory Procedures	Option 1	4,252,295	2,677,948	(1,574,347)
2103.9533	Maintenance Procedures	Option 1	4,612,425	4,593,634	(18,791)
2103.9534	Operating Procedures	Option 1	10,763,793	8,148,158	(2,615,635)
2103.9535	Hot Startup Planning	Option 1	373,242	1,121,733	748,491
2103.9536	Turnover to Operations	Option 1	454,344	-	(454,344)
2103.9537	Support to Other groups	Option 1	920,976	7,136,528	6,215,552
2104.9541	Early Option 2 Proposal Development (Labor)	Option 1	-	672,700	672,700
2105.9550	Aqueous Polishing Activities	Option 1	259,640	3,216,088	2,956,448
2105.9551	Powder Pellet Activities	Option 1	173,085	6,619,357	6,446,272
2105.9552	Rod Bundle Activities	Option 1	129,730	2,473,008	2,343,278
2105.9553	Balance of Plant Activities	Option 1	167,995	6,595,420	6,427,425
2105.9554	Laboratory Activities	Option 1	-	14,901,345	14,901,345
2105.9555	Maintenance Activities	Option 1	320,048	31,130,877	30,810,829
2105.9556	Logistics / Warehousing	Option 1	-	2,675,586	2,675,586

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Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
2105.9557	System Engineering Activities	Option 1	172,262	12,540,813	12,368,551
Subtotal MA 21			\$ 240,996,730	\$ 270,819,345	\$ 29,822,615
2201.8138	Relocation	Option 1	\$ -	\$ 20,912	\$ 20,912
2201.8139	Field Office Supplies	Option 1	-	-	-
2201.8141	ES&H Program	Option 1	1,473,688	8,149,431	6,675,743
2201.8143	Environmental Protection Program	Option 1	1,134,848	5,433,744	4,298,896
2201.8144	Industrial Safety Program	Option 1	1,022,974	930,909	(92,065)
2201.8145	Waste Management Program	Option 1	932,607	3,318,918	2,386,311
2201.8146	Fitness for Duty Program	Option 1	1,795,043	1,379,366	(415,677)
2201.8147	Emergency Preparedness Program	Option 1	243,004	1,640,343	1,397,339
2201.8148	Employee Safety Incentive Program	Option 1	519,249	1,053,890	534,641
2201.8149	ES & H Safety Engineer	Option 1	1,783,459	11,290,726	9,507,267
2201.8150	Field Office Supplies	Option 1	-	5,499	5,499
2201.8820	Field Office Supplies	Option 1	171,293	90,217	(81,076)
2201.9004	Field Office Supplies	Option 1	-	-	-
2201.9504	Field Office Supplies	Option 1	-	-	-
2201.9506	Field Office Supplies	Option 1	-	-	-
2202.8139	Field Office Supplies	Option 1	135,535	-	(135,535)
2202.8141	ES&H Program	Option 1	-	1,232,710	1,232,710
2202.8143	Environmental Protection Program	Option 1	-	949,660	949,660
2202.8145	Waste Management Program	Option 1	-	693,898	693,898
2202.8147	Emergency Response Program	Option 1	-	599,081	599,081
2202.8148	Employee Safety Incentive Program	Option 1	-	177,741	177,741
2202.8149	ES & H Safety Engineer	Option 1	-	2,101,834	2,101,834
2202.9004	Field Office Supplies	Option 1	2,434,223	-	(2,434,223)
2202.9504	Radiological Protection Early Start Up	Option 1	15,267,591	15,591,116	323,525
2202.9506	Field Office Supplies	Option 1	481,757	-	(481,757)
Subtotal MA 22			\$ 27,395,271	\$ 54,659,996	\$ 27,264,725
9008.0901	DOE Annual Costs for the SRS M&O Support to MOX fo all Infrastructur	Option 1	\$ 28,449,268	\$ 65,437,317	\$ 36,988,049
9009.0901	DOE/WSRC Support	Option 1	(0)	-	0
9009.0902	DOE Annual Costs for the SRS M&O Support to MOX for Infrastructure S	Option 1	97,675,478	56,179,840	(41,495,638)
9009.0903	DOE Tech Spt. (Non-MOX Services Cost)	Option 1	138,317,424	115,587,284	(22,730,140)
Subtotal MA 90			\$ 264,442,170	\$ 237,204,441	\$ (27,237,729)
Total Option 1			\$ 2,778,822,480	\$ 5,563,751,381	\$ 2,784,928,901

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Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
0110.5101	NRC Costs - MFFF	Base	\$ 12,492,680	\$ 12,646,529	\$ 153,849
0110.5301	Environmental Report	Base	1,808,835	1,822,489	13,655
0110.5302	Electrolyzer Testing	Base	268,674	268,684	10
0110.5303	ORNL Gallium Testing	Base	100,000	100,000	-
0110.5304	ORNL Criticality Review	Base	150,000	150,000	-
0110.5305	Clemson University Research	Base	1,300,232	1,421,977	121,745
0110.5306	Development & Test Programs	Base	2,061,991	2,111,621	49,630
0110.5307	Site Develop./Infrast. Improvement OPC Work	Base	496,072	496,340	268
0110.5308	SCE Scanner Testing	Base	506,071	511,780	5,709
0110.5401	MFFF Operations Planning	Base	3,546	(84,994)	(88,540)
0110.5402	Safety & Systems Integration	Base	213,271	210,415	(2,856)
0110.5411	Licensing	Base	5,058,850	5,107,144	48,293
0110.5421	Engineering Support to Licensing - PDG	Base	88,152	98,149	9,996
0110.5422	Engineering Support to Licensing - FDG	Base	103,586	121,379	17,793
0110.5423	Engine+B1001ering Support to Licensing - C/S	Base	112,400	116,292	3,892
0110.5424	Eng. Support to Lic. - Mech.Prog.	Base	193,906	283,621	89,716
0110.5425	Eng. Support to Lic.- Elect/ I&C/S&S/MC&A	Base	25,950	25,078	(872)
0110.5427	Engr Support to Lic - Nuclear Safety	Base	4,805,180	4,823,621	18,440
0110.5428	MFFF Environmental / Permitting	Base	324,405	320,086	(4,319)
0110.5431	Facility Security Vulnerability Assessment	Base	181,482	181,482	-
0110.5432	Facility Licensing Plans	Base	2,301,401	2,305,639	4,238
0110.5450	Miscellaneous Studies	Base	808,170	970,612	162,443
0110.5451	Coord. & Oversight of CETL Research Projects	Base	210,465	285,972	75,507
0110.5452	CAB Change Phase II Scoping & Devel	Base	178,090	180,858	2,768
0110.5453	Monitoring & Inspection Impacts Study	Base	30,700	30,935	235
0110.5454	CAB Phase II	Base	3,950	3,875	(75)
0110.5455	Maximize the use of MFFF Study	Base	-	104,822	104,822
0110.5499	Control Area Boundary Change Scoping	Base	732,197	731,640	(557)
0110.5601	DNFSB	Base	-	60	60
0111.1101	General	Base	5,026,335	4,800,117	(226,218)
0111.1102	Mobilization, De-Mob, & Close-out	Base	888,051	899,521	11,470
0111.1103	Management	Base	5,971,015	5,945,756	(25,259)
0111.1104	Administrative	Base	2,660,030	2,667,640	7,610
0111.1105	Support Services	Base	5,357,579	5,107,135	(250,444)
0111.1106	Miscellaneous	Base	756,216	737,690	(18,527)
0111.1107	General Expenses	Base	14,729,895	14,553,159	(176,736)

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Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
0111.1108	Procedure Development	Base	29	29	-
0112.8301	MDG Base Contract (Pre FY 2003)	Base	4,741,885	5,049,539	307,654
0113.1301	General	Base	16,203,184	16,151,645	(51,539)
0113.1302	Receiving	Base	812,940	814,098	1,158
0113.1303	Powder	Base	2,908,689	2,927,651	18,962
0113.1304	Pellets	Base	2,065,684	2,066,298	614
0113.1305	Cladding	Base	1,414,974	1,415,796	822
0113.1306	Assembling	Base	968,526	967,433	(1,093)
0113.1307	Laboratory	Base	557,218	557,757	538
0113.1308	Samples Pneumatic Transfer	Base	191,095	191,097	3
0113.1309	Waste Management	Base	436,191	436,733	541
0113.1310	Material Control & Accountability	Base	325,233	325,534	301
0113.1311	Process Control	Base	422,428	422,672	244
0113.1312	Integrated Safety Analysis	Base	5,059,365	5,080,631	21,266
0113.1313	Facility Input	Base	819,271	819,425	153
0113.1399	PDG MOX Process Unplanned Work	Base	386,378	363,641	(22,736)
0114.1401	General	Base	4,992,486	4,943,475	(49,011)
0114.1402	Dissolution	Base	4,389,754	4,396,665	6,910
0114.1403	Purification	Base	3,985,738	3,989,262	3,524
0114.1404	Conversion	Base	1,661,571	1,662,388	817
0114.1405	Facility Input	Base	3,071,732	3,073,636	1,904
0114.1406	Safety	Base	7,625,187	7,785,239	160,052
0115.1501	General	Base	13,537,594	13,628,548	90,954
0115.1502	Buildings, Structures & Yard	Base	37,545,386	37,399,208	(146,178)
0115.1503	Deliverables	Base	20,290	20,283	(7)
0115.1504	Mechanical Programs	Base	31,095,227	67,260,261	36,165,035
0115.1505	Electrical Programs	Base	780,168	917,015	136,846
0115.1506	Nuclear Safety Programs	Base	14,145,270	14,413,675	268,405
0115.1507	Mechanical Systems & Components	Base	27,601,213	28,782,999	1,181,786
0115.1508	Electrical Systems & Components	Base	33,524,806	40,963,289	7,438,483
0115.1509	Nuclear Safety Systems & Components	Base	2,715,956	2,710,756	(5,200)
0115.1510	Process Mechanical	Base	15,042,764	15,181,618	138,854
0115.1511	Mechanical Gloveboxes	Base	5,819,916	5,593,595	(226,321)
0115.1512	Site Development / Infrastructure Improvement	Base	2,101,908	1,966,135	(135,773)
0115.1513	Plant Design System	Base	37,535,687	52,553,299	15,017,613
0115.8154	Nuclear Radiation Protections	Base	-	-	-
0116.1601	DNFSB & Commonality Questions & Issues	Base	0	535	535

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Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
0116.8401	SDG Base Contract Pre-FY 2003	Base	2,516,494	2,463,869	(52,625)
0117.1701	Licensing	Base	14,857,708	14,916,060	58,352
0117.1702	Environmental Report	Base	6,678	6,128	(550)
0117.1703	Environment	Base	453,526	457,912	4,386
0117.1704	Safety & Health	Base	698,078	713,480	15,402
0117.1705	Emergency Planning	Base	152,275	149,349	(2,927)
0117.1706	ISA Support (Contractor's ODCs)	Base	19,944,162	19,852,077	(92,085)
0117.1707	Technology Assessment (TA) Support	Base	1,502,765	1,571,146	68,380
0117.1710	UCNI Training	Base	92,890	93,039	148
0118.1801	Office rent, suppl/serv, equi.& furnit L&P	Base	2,997,271	2,994,997	(2,274)
0118.1802	Furniture	Base	2,378,914	2,378,913	(1)
0118.1803	Cabling & Telephone	Base	94,023	94,023	(0)
0118.1804	Upfit	Base	387,935	387,936	1
0118.1805	Relocation Services	Base	10,495	10,495	-
0118.1806	Remote Location Office Space	Base	412,913	415,133	2,220
0119.1901	Computer Equipment & Software L&P	Base	5,643,574	5,719,902	76,329
0119.1902	Software	Base	1,136,702	1,136,702	0
0119.1903	Service Contracts	Base	283,607	283,607	0
0119.1904	Initial Setup	Base	12,910	13,101	191
0120.8110	Project Management Pre-Construction Planning	Base	4,945,005	4,974,617	29,611
0120.8120	Project Controls Pre-Construction	Base	2,498,517	2,525,925	27,408
0120.8130	Project QA Pre-Construction	Base	-	-	-
0120.8140	Project ES&H Pre-Construction	Base	765,345	758,325	(7,020)
0120.8160	Project Services & Admin Pre-Construction	Base	62,741	64,361	1,620
0120.8170	Procure./Subcontract Admin Pre-Construction	Base	270,533	284,712	14,179
0120.8200	PreOpt1BConstrPrjTitleIII EngineeringMgmt-LL EnginProcurement	Base	3,175	3,153	(22)
0120.8210	Engineering Civil / Structural Pre-Construction	Base	179,711	177,361	(2,349)
0120.8220	Engineering Mechanical Pre-Construction	Base	53,541	39,784	(13,757)
0120.8230	Engineering Electrical / I&C Pre-Construction	Base	61,123	60,918	(204)
0121.1654	MFFF Operations Planning	Base	11,426,550	10,880,272	(546,278)
0122.1611	PuO2 Polishing Planning	Base	670,387	159,814	(510,573)
0122.1612	DUO2 Supply Planning	Base	513,193	488,321	(24,872)
0123.1420	Up Front Design	Base	-	2,823,111	2,823,111
0124.1415	DMO - Preserve The Option	Base	-	3,134,723	3,134,723
Subtotal MA 01			\$ 429,487,860	\$ 494,922,248	\$ 65,434,387
0661.6101	Project Office Operations	Base	\$ 6,289,830	\$ 6,418,213	\$ 128,382

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Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
0661.6102	Personnel Relocations	Base	35,173	57,213	22,040
0661.6103	Project Support Services	Base	-	97	97
0661.6105	Mixed Oxide (MOX) Proj. Ext. Communications	Base	446,447	440,973	(5,474)
0661.6106	IT Labor	Base	3,770,735	3,753,790	(16,945)
0661.6110	Independent Review Team (IRT) Review - NA54	Base	1,475,958	1,486,360	10,402
0661.6150	Relocations	Base	3,055,742	3,056,897	1,155
0662.6201	Project Controls & Integration	Base	14,059,560	14,129,225	69,665
0662.6202	Risk Management	Base	939,493	923,190	(16,303)
0663.6301	QA Program Management & Administration	Base	604,125	597,540	(6,585)
0663.6302	Quality Engineering	Base	1,209,198	1,224,692	15,494
0663.6303	Quality Verification	Base	1,294,876	1,286,519	(8,358)
0664.6401	ES&H Integration	Base	1,345,129	1,340,978	(4,151)
0664.6402	Regulatory Affairs Management & Admin.	Base	452,998	431,238	(21,760)
0664.6403	Safety and Health	Base	75	75	-
0664.6404	Incident Investigation / Corrective Action Program	Base	-	(53)	(53)
0665.6501	Trade-off Studies	Base	1,291	2,286	995
0665.6502	Plutonium (Pu) Disposition Study	Base	-	457	457
0665.6505	NA	Base	-	-	-
0666.6600	Project Services & Administration	Base	1,670	1,670	-
0666.6601	Contracts	Base	18,707,760	19,104,032	396,272
0666.6602	Administration	Base	2,923,771	2,607,252	(316,520)
0666.6603	Electronic Doc / Records Management	Base	1,788,884	1,809,605	20,721
0666.6604	Training & Internal Communication	Base	332,019	362,896	30,877
0666.6605	Project Accounting / Finance	Base	2,928,733	2,912,125	(16,608)
0666.6606	Bank Analysis Fees	Base	3,097	16,703	13,606
0666.6608	Procurement	Base	3,014,377	3,027,990	13,614
0666.6609	Asset Management	Base	294,085	287,005	(7,080)
0667.6701	Licensing	Base	4,830	4,830	-
0668.6801	Charlotte Office Space	Base	52,913	52,238	(675)
0668.6802	Furniture	Base	33,304	33,304	0
0668.6803	Cabling & Telephone	Base	0	(17,325)	(17,325)
0668.6804	UpFit	Base	1,966	3,962	1,996
0668.6805	Relocation Services	Base	1,917	2,456	540
0668.6806	Remote Location Office Space	Base	46,201	46,201	(0)
0668.6810	Office Rent, Supplies, & Services	Base	5,792,974	5,833,773	40,799
0668.6811	Office Equipment & Furniture Lease & Purchase	Base	2,600,476	2,607,350	6,873
0668.6812	Computer Equipment and Software Leases & Purchases	Base	8,071,682	8,043,555	(28,127)

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			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
0668.8810	Offsite Office Rent, Supplies & Services	Base	3,293,692	3,331,590	37,897
0668.8811	Offsite Off.Equip.& Furnit. L. & P., and Workspace Upfit	Base	326,998	328,503	1,504
0668.8812	Offsite Computer Equip.& Software L.& P.	Base	728,823	749,822	20,999
0669.6901	Computer Hardware	Base	74,662	74,923	262
0669.6902	Computer Software	Base	21,584	21,717	133
0669.6903	Computer Services Contracts	Base	17,602	18,228	627
0669.6904	Initial Setup	Base	930	(9,464)	(10,394)
0670.8299	Process Unit Assembly Planning	Base	2,246,073	2,234,104	(11,969)
Subtotal MA 06			\$ 88,291,653	\$ 88,638,735	\$ 347,082
1204.8240	PEG BOA's, Sole Source & Adv.Procure. Items	Base	\$ 7,621,259	\$ 7,094,929	\$ (526,330)
1204.8241	PEG Management	Base	8,348,983	8,089,063	(259,920)
1204.8242	PEG Training & Technical Support	Base	4,480,527	4,473,163	(7,364)
1204.8243	PEG Build to Print Manuf./Install. Required	Base	413,137	420,711	7,574
1204.8244	PEG AP/MP Laboratory Design/Build	Base	1,521,991	2,151,804	629,813
1204.8245	PEG Documents External Review Support	Base	395,037	411,870	16,833
1204.8246	Process Support AP/MP Lab Design/Build	Base	1,652,363	1,534,414	(117,949)
1204.8247	PreOpt1ACnstPrjctProcUnitPEGVendorDesign	Base	21,166,096	36,139,755	14,973,659
1204.8248	PreOpt1BProcUnitsPEG Design/Bld UnitSpecs	Base	7,837,333	10,069,627	2,232,294
1204.8249	PreOpt1ACnstPrjct Proc Units PEG ODCs	Base	1,098,216	1,431,198	332,982
1204.8293	Mech/Struct Procurements Engineering	Base	(21,951)	-	21,951
1205.8250	US Regulations/ Process Requirements	Base	4,675,608	5,078,781	403,173
1205.8251	PreOpt1BConstPrjProc-USRG/PRG Req Mgmt	Base	1,654,432	1,726,646	72,214
1205.8252	US Regulations Personnel	Base	1,956,373	1,943,952	(12,421)
1205.8253	Process Requirements Personnel	Base	4,240,835	4,723,359	482,524
1205.8254	Pre-Option 1A Construction Project Process-General Support	Base	1,556,585	1,631,079	74,493
1205.8255	PreOpt1AConstPrjProc-USRG/PRG Admin Spt	Base	213	254	41
1205.8256	Facility Design Group Support to PEG	Base	434,416	582,035	147,619
1205.8257	Systems Engineering Group Support to I55EG	Base	247,426	251,565	4,140
1205.8259	PreOpt1AConstPrjProc-USRG/PRG - ODCs	Base	963,061	1,037,150	74,089
1209.8290	Pre-Option 1B MDG, SDG & PEG Management	Base	4,856,102	4,788,660	(67,442)
1209.8291	DCS Equipment Group Management - ODCs	Base	552,106	552,464	358
1211.8131	Project QA - Option 1	Base	682,418	666,916	(15,501)
1211.8171	PreOp1BCnstPrjMgmtPurchs Procurement - Mgt & Admin	Base	1,729,620	1,817,722	88,102
1212.8292	Commercial Grade Dedication (CGD)	Base	1,354,743	12,377,050	11,022,307
1212.8293	Chemical/Mechanical Subcontract Technical Representatives (STRs) and	Base	4,180,687	17,173,735	12,993,048
1212.8294	Electrical/I&C Procurements Engineering	Base	4,309,747	9,268,521	4,958,774

CB&I AREVA MOX Services, LLC.
MFFF Project Cost by Management Area

Schedule 6.1

Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1212.8295	PEG Support of Others (Facility Eq)	Base	15,049	463	(14,586)
1212.8296	PassPort Implementation & Support Engineering	Base	2,612,921	2,291,097	(321,824)
1212.8297	PEG - Vendor Support Activities for Self Procurements	Base	345,639	13,490	(332,149)
1212.8298	PEG Management & Administration (Facility Eq)	Base	1,421,186	1,271,685	(149,501)
1213.8292	PEG Technical Support & Training (Facility Eq)	Base	-	591,906	591,906
Subtotal MA 12			\$ 92,302,157	\$ 139,605,065	\$ 47,302,909
1301.8302	DCS Integrated Mgt	Base	\$ 5,815,155	\$ 6,536,527	\$ 721,373
1301.8303	MDG Support Services	Base	2,268,635	2,554,857	286,222
1301.8304	MDG Travel & Relocation - DCS	Base	3,186,264	2,923,393	(262,872)
1301.8305	Production Centers Mgt	Base	1,839,335	1,834,853	(4,482)
1301.8306	MDG Travel & Relocation Production Centers	Base	1,554,772	1,574,026	19,254
1301.8307	MDG ODCs Production Centers	Base	3,245,262	2,907,943	(337,318)
1301.8308	MDG Procurement Engineering Support	Base	836,816	806,667	(30,149)
1301.8390	Design Offices Mgt	Base	12,182,827	13,209,064	1,026,237
1301.8391	Production Internal Support	Base	9,622,880	11,044,415	1,421,535
1302.8302	GDE - Rod Decladding	Base	-	-	-
1302.8309	Technical Management	Base	14,129,663	14,604,868	475,205
1302.8310	Technical Requirement Representatives	Base	3,732,781	3,394,330	(338,451)
1302.8391	GDE - Rod Decladding	Base	-	-	-
1302.8392	Follow-up	Base	9,395,507	11,387,710	1,992,202
1302.839A	TSR Support from PDG	Base	669,122	495,197	(173,925)
1302.839B	LLP/LTP/NTP Detailed Piping Design	Base	-	188,202	188,202
1303.8312	NDD - PuO2 Can Receiving & Emptying	Base	887,937	1,180,158	292,221
1303.8313	NDP - Primary Dosing	Base	2,623,186	3,075,251	452,065
1303.8314	NDS - Final Dosing	Base	2,845,323	3,093,351	248,028
1303.8319	NTM - Jar Storage & Handling	Base	3,351,931	4,266,963	915,032
1303.8320	NXR - Powder Auxiliary	Base	1,458,995	2,032,952	573,957
1304.8311	DCE - PuO2 Buffer Storage	Base	743,598	1,181,879	438,281
1304.8312	NDD Conformance	Base	47,851	132,157	84,306
1304.8313	NDP Conformance	Base	1,199	18,959	17,760
1304.8314	NDS Conformance	Base	70,585	120,759	50,174
1304.8319	NTM Conformance	Base	14,997	68,967	53,970
1304.831A	VDR Design	Base	340,737	393,445	52,708
1304.831B	VDU Design	Base	190,740	174,431	(16,309)
1304.831C	DCM Design	Base	851,334	582,630	(268,704)
1304.831G	GMK Design	Base	250,649	235,016	(15,633)

CB&I AREVA MOX Services, LLC.
MFFF Project Cost by Management Area

Schedule 6.1

Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1304.831H	SCE Design	Base	566,643	708,694	142,051
1304.831J	SMK Design	Base	543,419	641,167	97,748
1304.831L	SXE Design	Base	528,315	403,954	(124,361)
1304.831M	TAS Design	Base	609,723	675,546	65,823
1304.831N	TCL/TCK/TGJ Design	Base	727,871	644,809	(83,062)
1304.831P	TCP Design	Base	336,594	371,805	35,211
1304.831Q	TGM Design	Base	956,945	1,274,482	317,537
1304.831R	TGV Design	Base	-	-	-
1304.831Y	LFX Design	Base	225,927	277,136	51,209
1304.8320	NXR Conformance	Base	-	2,071	2,071
1304.8321	NCR - Scrap Processing	Base	3,343,517	4,035,217	691,700
1304.8324	PRE / PRF - Grinding	Base	1,907,562	2,303,385	395,823
1304.8325	PTE/PTF — Pellet Inspect & Sorting	Base	326,626	396,055	69,429
1304.8326	PQE — Quality Control & Manual Sorting	Base	-	444,859	444,859
1304.8327	PAD - Pellet Repackaging	Base	250,030	277,167	27,137
1304.8328	PAR - Scrap Box Loading	Base	371,422	478,804	107,382
1304.8329	PSE - Green Pellet Storage	Base	466,501	629,885	163,383
1304.832A	KCB Design	Base	229,253	160,747	(68,506)
1304.832G	KDA Design	Base	343,594	330,971	(12,623)
1304.8330	PSF - Sintered Pellet Storage	Base	578,166	717,822	139,656
1304.8331	PSI - Scrape Pellet Storage	Base	921,984	1,146,863	224,879
1304.8332	PSJ - Ground & Sorted Pellet Storage	Base	712,294	985,943	273,648
1304.8333	PML - Pellet Handling	Base	3,694,380	4,201,902	507,522
1304.8336	GDE - Rod Decladding	Base	546,308	932,184	385,876
1304.8338	SEK Helium Leak Test	Base	323,770	220,636	(103,134)
1304.8344	LCT - Test Line	Base	553,058	951,193	398,135
1304.8345	VDR - Filter Dismantling	Base	-	12	12
1304.8346	DDP - UO2 Drum Emptying	Base	407,403	537,418	130,015
1304.8348	KDM Conformance	Base	88,262	477,130	388,868
1304.8363	KDA - Decanning (B)	Base	1,813,719	3,415,974	1,602,255
1304.8365	KPG Sampling, Automatic Conformance	Base	196,230	668,054	471,824
1304.8370	KPA 4010 Purification Cycle Conformance	Base	50,402	233,571	183,169
1304.8375	KDM - Milling (AFS) - PuO2 Can Handling	Base	482,144	529,834	47,690
1304.8376	KDM 2000 - Prepolishing Milling Conformance	Base	210,469	647,479	437,010
1304.8377	KDM 2200 Pre-Polishing Milling	Base	569,061	707,373	138,312
1304.8378	KDR 1/2/3/4 ADO Conform	Base	210,259	594	(209,665)
1304.8379	KDR - Recanning Unit	Base	600,185	210,863	(389,322)

CB&I AREVA MOX Services, LLC.
MFFF Project Cost by Management Area

Schedule 6.1

Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1304.8397	Struct. LLE - Aiken	Base	352,677	305,686	(46,991)
1305.8315	LLP Pneumatic Transfer (33 mm)	Base	1,397,356	1,807,734	410,378
1305.8316	LLP Pneumatic Transfer (76 mm)	Base	738,814	986,221	247,407
1305.8318	NTP Pneumatic Transfer (133 mm)	Base	785,457	1,085,049	299,592
1305.8325	PTE/PTF - Pellet Inspect & Sorting	Base	1,667,730	1,593,203	(74,527)
1305.8326	PQE - QC & Manual Sorting	Base	1,437,808	1,186,020	(251,789)
1305.8361	KCB - PuO2 Homogenization & Sampling	Base	1,464,913	1,876,771	411,858
1305.8362	KCC - Canning	Base	1,579,664	1,841,250	261,586
1305.8365	KPG - Liquid Sampling (W1)	Base	938,353	900,405	(37,948)
1305.8366	KDB/KPF Electrolyzers (W9)	Base	1,233,421	1,365,619	132,198
1305.8367	KCA - Oxalic Precip Metering Wheels	Base	687,971	821,657	133,686
1305.8368	KDA - Dosing Hoppers (W6)	Base	1,841,117	2,271,901	430,784
1305.8369	KPA/KPB - Settler Mixers (W7)	Base	852,049	911,336	59,287
1305.8370	KPA 4010 Purification Cycle	Base	394,454	377,100	(17,354)
1305.8371	KCA - Oxalic Precip Oxid Precip & Filter	Base	552,846	718,321	165,475
1305.8372	KCA - Oxalic Precip Oxid Calcin Furn.	Base	823,556	906,346	82,790
1305.8373	KCB - PuO2 Tumbler Mixer	Base	543,854	532,877	(10,976)
1305.8374	KDD - Decoloration / Dissolution	Base	2,545,246	3,076,733	531,487
1305.8376	KDM - Milling (AFS)	Base	1,994,225	1,955,112	(39,113)
1305.8378	KDR - Recanning Unit	Base	1,587,663	1,711,309	123,646
1305.8380	KPB 1000 Solvent Recovery	Base	687,875	779,190	91,315
1305.8381	KDM-Pre-Polishing MillingUnits6000-7400 Dsgn	Base	1,156,174	1,119,284	(36,889)
1305.8399	Dosing Hopper - Structural Qualification	Base	55,200	48,456	(6,744)
1306.8322	NPE/NPF - Homogenization & Pelletizing	Base	1,439,711	1,439,629	(82)
1306.8323	PFE/PFF - Sintering Furnace	Base	8	8	0
1306.8334	GME - Rod Cladding & Decontamination	Base	5,886,780	6,773,734	886,955
1306.8339	SDK - Rod Inspection & Sorting	Base	1,120,227	1,341,572	221,346
1306.8347	NBX/NBY - Ball Mining	Base	2,287,881	2,641,655	353,774
1306.8348	KDM - Milling	Base	901,055	937,277	36,222
1306.8349	NPG/H/I-Homoginization & Pelletizing Design	Base	4,875,339	5,925,669	1,050,330
1306.8398	Struct. LLE - Bagnol	Base	586,697	957,492	370,795
1307.831A	VDR	Base	(99,558)	314,988	414,546
1307.831B	VDU	Base	(51,218)	203,988	255,206
1307.831C	DCM	Base	188,956	186,681	(2,275)
1307.831D	DCP	Base	-	-	-
1307.831E	VDQ	Base	-	-	-
1307.831F	VDT	Base	-	-	-

CB&I AREVA MOX Services, LLC.
MFFF Project Cost by Management Area

Schedule 6.1

Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1307.831G	GMK	Base	26,858	152,250	125,392
1307.831H	SCE	Base	370,314	-	(370,314)
1307.831J	SMK	Base	401,273	188,086	(213,187)
1307.831K	STK	Base	349,931	166,743	(183,188)
1307.831L	SXE	Base	98,936	-	(98,936)
1307.831M	TAS	Base	414	-	(414)
1307.831N	TCL/TCK/TGJ	Base	572,675	-	(572,675)
1307.831P	TCP	Base	7,405	249,043	241,638
1307.831Q	TGM	Base	83,776	26,121	(57,655)
1307.831R	TGV	Base	25,009	-	(25,009)
1307.831S	Grp 5.1	Base	-	-	-
1307.831T	Grp 5.2	Base	-	-	-
1307.831U	Grp 5.3	Base	-	-	-
1307.831X	Grp 5.6	Base	-	-	-
1307.831Y	Grp 5.8 / LFX	Base	(100,098)	-	100,098
1307.832A	KCB	Base	(37,503)	-	37,503
1307.832B	KCD	Base	-	-	-
1307.832C	KPA	Base	-	-	-
1307.832D	KPB	Base	-	-	-
1307.832E	KPC	Base	-	-	-
1307.832F	KWD	Base	-	-	-
1307.832G	KDA	Base	(186,468)	-	186,468
1308.832A	KCB	Base	-	-	-
1308.832B	KCD	Base	-	-	-
1308.832C	KPA	Base	-	-	-
1308.832D	KPB	Base	-	-	-
1308.832E	KPC	Base	-	-	-
1308.832F	KWD	Base	-	-	-
1308.832G	KDA	Base	-	-	-
1308.832H	Grp 5.4	Base	-	-	-
1308.832J	Grp 5.5	Base	-	-	-
1309.839C	DCP Design	Base	1,233,174	1,509,027	275,853
1309.839D	SXE DCR 10-0422	Base	41,004	175,664	134,660
1309.83KU	K Unit Pumps and Valves Design	Base	3,001,805	2,048,230	(953,575)
1310.83JL	JLE and LTТА VAR	Base	-	501,479	501,479
1310.83LB	Lab Unit Glovebox Design	Base	6,838,818	4,692,873	(2,145,945)
1310.83LE	Laboratory Responsible Engineers and STRs	Base	713,444	1,893,632	1,180,188

CB&I AREVA MOX Services, LLC.
MFFF Project Cost by Management Area

Schedule 6.1

Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1310.83TS	Task Support Requests	Base	1,720,793	606,129	(1,114,664)
1311.83MF	Multi Fuel Design - DCRs	Base	-	1,091,946	1,091,946
Subtotal MA 13			\$ 163,465,978	\$ 182,862,060	\$ 19,396,082
1400.8401	SDG Base Contract Pre-FY 2003	Base	\$ -	\$ -	\$ -
1401.8402	Management	Base	10,336,701	15,178,727	4,842,026
1401.8403	Support Services	Base	10,828,126	16,693,729	5,865,603
1401.8404	SDG Travel & Relocation DCS	Base	2,797,063	3,595,869	798,807
1401.8405	Facility Space, Utilities Supplies & Services	Base	584,903	585,591	687
1401.8418	Design Reviews	Base	554,699	421,952	(132,747)
1401.8419	PLC & Supervisor for Fire Safety	Base	-	-	-
1402.8406	Platform Hardware & Maintenance	Base	5,668,945	4,064,808	(1,604,137)
1402.8407	Platform Hardware & Maintenance - Aiken	Base	2,974,087	9,885,980	6,911,893
1402.8408	SDG Procurement Engineering Support	Base	2,643,073	2,118,987	(524,085)
1402.8410	Standards	Base	5,551,916	6,652,081	1,100,165
1402.8411	Networks	Base	565,490	846,427	280,936
1402.8413	Laboratory Information Management System (LIMS)	Base	1,086,571	2,159,452	1,072,881
1402.8414	Process PCs	Base	3,867,684	2,715,494	(1,152,189)
1402.8417	RESERVED	Base	-	-	-
1402.8477	PLC & Supervisor for Unit KWG	Base	2,632	-	(2,632)
1402.8490	Simulation & Testing	Base	2,350,845	3,516,527	1,165,682
1402.8497	CGD Embedded Software Evaluation Support	Base	-	-	-
1403.8412	Manufacturing Management Information System (MMIS)	Base	8,166,997	11,834,983	3,667,987
1404.8420	PLC's General	Base	6,273,187	9,163,751	2,890,565
1404.8421	PLC & Supervisor for Unit DRS/DDP	Base	265,395	317,978	52,583
1404.8422	PLC & Supervisor for Unit DCP/DCM	Base	285,618	465,729	180,111
1404.8423	PLC & Supervisor for Unit DCE/NTP	Base	359,379	542,483	183,104
1404.8424	PLC & Supervisor for Unit NDD	Base	438,978	786,601	347,623
1404.8425	PLC & Supervisor for Unit NDP	Base	682,677	1,075,897	393,220
1404.8426	PLC & Supervisor for Unit NBX/NBY	Base	498,276	711,638	213,362
1404.8427	PLC & Supervisor for Unit NDS	Base	669,188	1,036,479	367,291
1404.8428	PLC & Supervisor for Unit NXR	Base	539,770	785,887	246,117
1404.8429	PLC & Supervisor for Unit NCR	Base	468,698	803,389	334,691
1404.8430	PLC & Supervisor for Unit NTM	Base	802,903	1,069,351	266,448
1404.8431	PLC & Supervisor for Unit NPE/NPF	Base	1,006,420	1,530,655	524,235
1404.8432	PLC & Supervisor for Unit LTP	Base	314,862	457,658	142,795
1404.8433	PLC & Supervisor for Unit PFE/PFF	Base	917,858	1,351,119	433,261

CB&I AREVA MOX Services, LLC.
MFFF Project Cost by Management Area

Schedule 6.1

Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1404.8434	PLC & Supervisor for Unit PRE/PRF	Base	685,882	863,994	178,112
1404.8435	PLC & Supervisor for Unit PTE/PTF	Base	572,730	976,017	403,287
1404.8436	PLC & Supervisor for Unit PQE	Base	498,246	690,866	192,620
1404.8437	PLC & Supervisor for Unit PAD	Base	345,162	717,963	372,801
1404.8438	PLC & Supervisor for Unit PAR	Base	268,538	358,147	89,609
1404.8439	PLC & Supervisor for Unit PSE	Base	313,991	509,018	195,027
1404.8440	PLC & Supervisor for Unit PSF	Base	291,444	445,990	154,546
1404.8441	PLC & Supervisor for Unit PSI	Base	520,594	699,084	178,490
1404.8442	PLC & Supervisor for Unit PSJ	Base	294,578	346,367	51,789
1404.8443	PLC & Supervisor for Unit GME/GMF	Base	1,036,693	2,391,966	1,355,273
1404.8444	PLC & Supervisor for Unit GMK	Base	330,859	429,250	98,391
1404.8445	PLC & Supervisor for Unit GDE	Base	252,310	382,174	129,864
1404.8446	PLC & Supervisor for Unit SXE	Base	301,398	312,383	10,985
1404.8447	PLC & Supervisor for Unit SEK	Base	213,769	501,346	287,577
1404.8448	PLC & Supervisor for Unit SDK	Base	480,030	854,364	374,334
1404.8449	PLC & Supervisor for Unit SCE	Base	280,661	389,985	109,324
1404.8450	PLC & Supervisor for Unit SMK/STK	Base	264,614	444,178	179,564
1404.8451	PLC & Supervisor for Unit TGM	Base	329,704	511,706	182,002
1404.8452	PLC & Supervisor for Unit TGV	Base	365,675	76,311	(289,365)
1404.8453	PLC & Supervisor for Unit TAS	Base	323,296	589,992	266,696
1404.8454	PLC & Supervisor for Unit TCK	Base	232,217	216,548	(15,669)
1404.8455	PLC & Supervisor for Unit TCP	Base	293,119	454,702	161,583
1404.8456	PLC & Supervisor for Unit TCL/TGJ	Base	260,094	307,091	46,997
1404.8457	PLC & Supervisor for Unit TXE	Base	-	-	-
1404.8458	PLC & Supervisor for Unit LCT	Base	233,520	95,641	(137,879)
1404.8459	PLC & Supervisor for Unit VDQ	Base	289,040	-	(289,040)
1404.8460	PLC & Supervisor for Unit VDT	Base	272,705	383,623	110,918
1404.8461	PLC & Supervisor for Unit VDR/VDU	Base	307,916	29,649	(278,267)
1404.8485	PLC & Supervisor for Fire Safety	Base	112,727	42,505	(70,222)
1404.8486	PLC & Supervisor for LGF	Base	248,541	305,291	56,750
1404.8487	M&I - PRE/PRF	Base	22,704	-	(22,704)
1405.8462	PLC & Supervisor for Unit KDD	Base	618,915	863,150	244,235
1405.8463	PLC & Supervisor for Unit KDA	Base	1,227,686	1,813,250	585,564
1405.8464	PLC & Supervisor for Unit KDB	Base	362,161	455,895	93,734
1405.8466	PLC & Supervisor for Unit KPA	Base	802,321	926,538	124,217
1405.8467	PLC & Supervisor for Unit KPB	Base	294,556	317,577	23,021
1405.8468	PLC & Supervisor for Unit KPC	Base	450,704	391,037	(59,667)

CB&I AREVA MOX Services, LLC.
MFFF Project Cost by Management Area

Schedule 6.1

Cost Account	Cost Account Description	Contract	[A]	[B]	[C] = B - A
			2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1405.8469	PLC for Unit LFX	Base	145,197	45,858	(99,339)
1405.8470	PLC & Supervisor for Unit KPG	Base	459,965	650,175	190,210
1405.8471	PLC & Supervisor for Unit LLP	Base	361,211	703,119	341,908
1405.8472	PLC & Supervisor for Unit KCA	Base	369,527	481,004	111,477
1405.8473	PLC & Supervisor for Unit KCB	Base	463,461	714,164	250,703
1405.8474	PLC & Supervisor for Unit KCC	Base	440,253	545,313	105,060
1405.8475	PLC & Supervisor for Unit KCD	Base	374,760	395,510	20,750
1405.8476	PLC & Supervisor for Unit KWD	Base	308,186	336,167	27,981
1405.8477	PLC & Supervisor for Unit KWG	Base	360,871	373,415	12,545
1405.8478	PLC & Supervisor for Unit KDM	Base	976,950	2,322,500	1,345,550
1405.8480	PLC & Sup. for Unit KUA/KUB/KUD/KUG/KUH	Base	922,792	567,817	(354,975)
1405.8481	PLC & Supervisor for Ventilation	Base	1,624,291	1,090,387	(533,904)
1405.8482	PLC & Supervisor for Electrical Distribution	Base	734,153	513,569	(220,584)
1405.8483	PLC & Supervisor for Fluids	Base	1,145,980	656,234	(489,746)
1405.8484	PLC & Supervisor for Unit KDR	Base	401,926	53,068	(348,858)
1405.8486	PLC & Supervisor for LGF	Base	-	-	-
1405.8490	Simulation & Testing	Base	-	-	-
1405.8494	Independent Software Verification & Validation	Base	-	-	-
1405.8496	SPLC Procurement Contract Oversight	Base	1,015,728	12,237,107	11,221,379
1405.8497	CGD Embedded Software Evaluation Support	Base	-	662,001	662,001
1406.8419	Software Analysis & Translation	Base	2,911,338	2,911,871	533
1407.8409	PLC & Supervisor for Fire Safety	Base	-	-	-
Subtotal MA 14			\$ 98,518,631	\$ 144,722,097	\$ 46,203,466
Base Subtotal			\$ 872,066,279	\$ 1,050,750,205	\$ 178,683,926
MFFF Project Total			\$ 3,650,888,759	\$ 6,614,501,585	\$ 2,963,612,827

Sources:

[A] May 2007 PRISM Data adjusted for budget transfers between July 2007 and September 2012

[B] 2012 contract proposal value as stated in December 2012 PRISM data and adjusted for 2012 Rebaseline Addendums

[C] Calculated

CB&I AREVA MOX Services, LLC.
MFFF Project Cost Growth by Cost Account and Claim Category

Schedule 6.11

Cost Account	Cost Account Description	Contract	Claim Category	[A] [B] [C] = B - A		
				2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1003.8033	PUDC Procurement & Fabrication Support	Option 1	Process Units	\$ 2,266,768	\$ 11,010,319	\$ 8,743,551
1004.8043	PUDC Site Construction Support	Option 1	Process Units	7,825,052	38,089,073	30,264,021
1004.8045	Software	Option 1	Process Units	10,703,048	15,422,427	4,719,379
1005.8056	PUDC Startup Support	Option 1	Process Units	6,351,227	19,280,579	12,929,352
1600.8601	Management / Admin	Option 1	Process Units	2,710,032	9,826,376	7,116,344
1600.8602	Project Controls	Option 1	Process Units	3,103,965	9,441,747	6,337,782
1600.8603	QA / QC	Option 1	Process Units	100,762	88,152	(12,610)
1601.8611	Business Travel	Option 1	Process Units	3,706,956	5,597,889	1,890,933
1602.8621	Supervision / Admin	Option 1	Process Units	2,114,941	4,493,560	2,378,619
1603.8631	Supervision / Admin	Option 1	Process Units	11,417,852	7,091,522	(4,326,329)
1603.8632	Job Living Expense	Option 1	Process Units	-	418,575	418,575
1603.8641	Management / Admin	Option 1	Process Units	(271,511)	-	271,511
1604.8641	Team Center Initiative	Option 1	Process Units	271,511	315,244	43,733
1605.8645	CA - NRC/CGIE - PUDC Support	Option 1	Process Units	-	5,663,563	5,663,563
1618.8748	PAD - Preplanning	Option 1	Process Units	-	-	-
1618.8749	PAR - Preplanning	Option 1	Process Units	-	-	-
1623.8785	Process Assembly Facilities	Option 1	Process Units	28,909,318	33,434,879	4,525,561
1701.8701	KCB - Homogenization - Sampling	Option 1	Process Units	1,934,236	6,458,691	4,524,455
1701.8702	KCC - PuO2 Decanning	Option 1	Process Units	1,924,402	4,993,127	3,068,725
1701.8703	KDA - PUO2 Decanning	Option 1	Process Units	3,627,549	19,430,268	15,802,719
1701.8704	KDM - Pre-Polishing Milling	Option 1	Process Units	9,462,891	32,784,460	23,321,569
1701.8705	KDR - Recanning	Option 1	Process Units	1,901,161	218,211	(1,682,950)
1701.8706	KPA GB 4010	Option 1	Process Units	1,004,520	2,531,529	1,527,009
1701.8751		Option 1	Process Units	-	-	-
1701.8777	KPG - Sampling Automatic	Option 1	Process Units	2,299,639	6,950,492	4,650,853
1701.8795	Long Lead Procurements	Option 1	Process Units	(2,786,631)	-	2,786,631
1702.8707	KCB 5000 Manufacturing	Option 1	Process Units	672,204	650,769	(21,435)
1702.8708		Option 1	Process Units	-	-	-
1702.8709		Option 1	Process Units	-	-	-
1702.8710		Option 1	Process Units	-	-	-
1702.8711		Option 1	Process Units	-	-	-
1702.8712	VDR - Filter Dismantling	Option 1	Process Units	1,768,495	61,433	(1,707,062)
1702.8713	VDU - Maintenance & Mechanical Dismantling	Option 1	Process Units	1,145,133	20,269	(1,124,864)
1702.8714		Option 1	Process Units	-	-	-
1703.8715	DCM - PuO2 3013 Storage	Option 1	Process Units	2,035,711	7,020,517	4,984,806
1703.8716	DCP - PuO2 Receiving	Option 1	Process Units	6,463,066	6,290,272	(172,794)
1703.8717	KDA - PUO2 Decanning (EQ - 6000 Density Measurement)	Option 1	Process Units	639,873	804,180	164,307
1703.8718		Option 1	Process Units	-	-	-
1703.8719		Option 1	Process Units	-	-	-
1704.8720	SDK - Rod Inspection and Sorting	Option 1	Process Units	2,941,521	2,373,011	(568,510)
1704.8721	SEK - Helium Leak Test	Option 1	Process Units	729,118	1,737,208	1,008,090
1705.8722	GMK - Rod Tray Loading	Option 1	Process Units	982,195	1,162,390	180,195
1705.8723	SCE - Rod Scanning	Option 1	Process Units	2,444,526	3,424,860	980,334
1705.8724	SMK - Rod Tray Handling	Option 1	Process Units	2,112,509	2,488,168	375,659
1705.8725	STK - Rod Storage	Option 1	Process Units	1,863,442	4,226,278	2,362,836
1705.8726	SXE - X Ray Inspection	Option 1	Process Units	2,095,947	2,365,417	269,470
1705.8727	TAS - Assembly Handling and Storage	Option 1	Process Units	1,113,247	9,358,223	8,244,976
1705.8728	TCK - Assembly Dry Cleaning	Option 1	Process Units	362,720	745,981	383,261
1705.8729	TCL - Assembly Final Inspection	Option 1	Process Units	2,008,889	1,275,021	(733,868)
1705.8730	TGJ - Reserve Pit	Option 1	Process Units	2,010,346	358,421	(1,651,925)
1705.8731	TCP - Assembly Disdimensional Inspection	Option 1	Process Units	1,608,930	2,087,795	478,865

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1705.8732	TGM - Assembly Mockup Loading	Option 1	Process Units	3,651,566	2,896,012	(755,554)
1705.8733	TGV - Assembly Mounting	Option 1	Process Units	1,300,960	817,271	(483,689)
1706.8734	PSE - Green Pellet Storage	Option 1	Process Units	2,995,385	7,725,288	4,729,903
1706.8735	PSF - Sintering Pellet Storage	Option 1	Process Units	3,059,559	7,545,089	4,485,530
1706.8736	PSI - Scrap Pellet Storage	Option 1	Process Units	2,962,771	8,326,080	5,363,309
1706.8737	PSJ - Ground & Sorted Pellet Storage	Option 1	Process Units	3,013,168	8,700,651	5,687,483
1707.8738	Lab Equip - LRD/LPG/LBT/LAC/KLN/KLL/KLK/KLH	Option 1	Process Units	5,107,852	9,269,740	4,161,888
1707.8739	Lab Equip - LME/LAU/FLT	Option 1	Process Units	2,536,095	5,505,154	2,969,059
1707.8740	Lab Equip - LSR/LCP/KLJ	Option 1	Process Units	6,615,656	10,858,433	4,242,777
1707.8741	Lab Equip - LPS/LET/LER/LDS/KLM/KLF/KLB/KLC/KLD	Option 1	Process Units	6,827,803	13,008,455	6,180,652
1707.8742	Lab Equip - KLO/KLI/KLG/KLA/KLE	Option 1	Process Units	7,139,421	10,325,401	3,185,980
1707.8743	Lab Equip - LSG/LLI	Option 1	Process Units	419,067	641,331	222,264
1707.8744	Lab Equip - LFX	Option 1	Process Units	1,409,182	2,368,710	959,528
1708.8745	DCE - PUO2 Buffer Storage	Option 1	Process Units	2,172,985	11,862,545	9,689,560
1708.8746	GDE - Rod Decladding	Option 1	Process Units	1,043,388	3,778,042	2,734,654
1708.8747	GME - Rod Cladding and Decontamination	Option 1	Process Units	8,888,637	26,508,613	17,619,976
1708.8748	PAD - Preplanning	Option 1	Process Units	594,028	2,114,547	1,520,519
1708.8749	PAR - Preplanning	Option 1	Process Units	555,296	2,046,442	1,491,146
1708.8750	PML - Pellet Handling	Option 1	Process Units	6,826,152	26,530,210	19,704,058
1708.8751	PQE - Quality Control & Manual Sorting	Option 1	Process Units	3,300,657	7,432,755	4,132,098
1708.8752	PRE - Pellet Grinding	Option 1	Process Units	2,839,088	7,040,991	4,201,903
1708.8753	PRF - Pellet Grinding	Option 1	Process Units	2,839,088	6,926,812	4,087,724
1708.8754	PTE - Pellet Inspection & Sorting	Option 1	Process Units	1,222,670	5,806,075	4,583,405
1708.8755	PTF - Pellet Inspection & Sorting	Option 1	Process Units	1,216,910	5,693,786	4,476,876
1709.8756	DDP - UO2 Drum Emptying	Option 1	Process Units	1,261,619	2,858,233	1,596,614
1709.8757	LCT - Test Line (part of laboratory)	Option 1	Process Units	2,615,834	3,074,651	458,817
1709.8758	NBX - Primary Blend Ball Milling	Option 1	Process Units	1,399,068	3,817,183	2,418,115
1709.8759	NBY - Scrap Ball Milling	Option 1	Process Units	1,399,068	3,233,671	1,834,603
1709.8760	NCR - Scrap Processing	Option 1	Process Units	5,294,395	9,035,233	3,740,838
1709.8761	NDD - PUO2 Can Receiving and Emptying	Option 1	Process Units	1,578,425	3,803,765	2,225,340
1709.8762	NDP - Primary Dosing	Option 1	Process Units	4,193,563	12,177,516	7,983,953
1709.8763	NDS - Final Dosing	Option 1	Process Units	5,122,007	15,225,662	10,103,655
1709.8764	NTM - Jar Storage and Handling	Option 1	Process Units	6,716,574	27,061,590	20,345,016
1709.8765	NXR - Powder Auxiliary	Option 1	Process Units	2,022,419	6,940,680	4,918,261
1710.8766	NPG - Homogenization & Pelletizing	Option 1	Process Units	3,917,028	14,407,626	10,490,598
1710.8767	NPH - Homogenization & Pelletizing	Option 1	Process Units	3,862,290	13,959,131	10,096,841
1710.8768	NPI - Homogenization & Pelletizing	Option 1	Process Units	3,873,576	2,312,137	(1,561,439)
1711.8769	KLA - Precipitation - Filtration - Oxidation	Option 1	Process Units	2,345,151	8,520,845	6,175,694
1711.8770	KCB GB1000 - Homogenization - Sampling	Option 1	Process Units	964,252	2,679,741	1,715,489
1711.8771	KDA - PUO2 Decanning	Option 1	Process Units	404,974	998,491	593,517
1711.8772	KDB - Dissolution	Option 1	Process Units	2,539,799	9,591,887	7,052,088
1711.8773	KDD - Dissolution of Chlorinated Feed	Option 1	Process Units	4,764,685	20,578,565	15,813,880
1711.8774	KDM - Pre-Polishing Milling (GB6400/7400)	Option 1	Process Units	786,781	1,380,592	593,811
1711.8775	KPA GB4000	Option 1	Process Units	1,928,637	3,378,746	1,450,109
1711.8776	KPB GB1000	Option 1	Process Units	681,155	1,777,821	1,096,666
1711.8777	KPG - Sampling Automatic	Option 1	Process Units	-	55,253	55,253
1711.8778	LLP - Pneumatic Transfer (33mm, PUO2 cans) Equipment	Option 1	Process Units	2,315,566	6,852,035	4,536,469
1711.8779	LTP - Pneumatic Transfer (76mm, PUO2 cans) Equipment	Option 1	Process Units	1,080,507	4,405,665	3,325,158
1711.8780	NTP - Pneumatic Transfer (133mm, PUO2 cans) Equipment	Option 1	Process Units	1,947,379	6,673,608	4,726,229
1712.8781	NPP - Additives Preparation	Option 1	Process Units	1,430,363	1,161,650	(268,713)
1712.8782	PFE/PFF - Sintering Furnace	Option 1	Process Units	24,950,333	71,472,962	46,522,629

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1712.8783	TXE - Assembly Packaging	Option 1	Process Units	1,051,357	1,484,577	433,220
1712.8784	DRS - UO2 Receiving and Storage	Option 1	Process Units	152,633	-	(152,633)
1712.8786	PFF - Sintering Furnace	Option 1	Process Units	4	-	(4)
1713.8790	Process Unit Support	Option 1	Process Units	2,519,533	6,239,241	3,719,708
1713.8791	Assembly Suspense Accounts	Option 1	Process Units	-	-	-
1714.8708	KCD - Oxalic Mother Liquors Recovery Unit	Option 1	Process Units	857,872	742,665	(115,207)
1714.8709	KPA (GB2000, 2010, 3000, 8000, 8510) Purification Cycle	Option 1	Process Units	1,955,668	3,273,958	1,318,290
1714.8710	KPC - Nitric Acid Recovery Liquid Ring Pump GB	Option 1	Process Units	915,063	769,481	(145,582)
1714.8711	KWD - Aqueous Waste Reception	Option 1	Process Units	1,260,032	1,276,827	16,795
1714.8714	KPB (GB2000) Solvent Recovery Unit	Option 1	Process Units	406,920	564,199	157,279
1715.8716	DCP - PuO2 Receiving	Option 1	Process Units	-	157,000	157,000
1715.8718	VDQ Waste Storage	Option 1	Process Units	3,069,408	639	(3,068,769)
1715.8719	VDT Waste Nuclear Count - Drum Hdling & NDA P	Option 1	Process Units	889,899	4,468,007	3,578,108
1716.8791	Assembly BOAs Accounts	Option 1	Process Units	10,629,229	50,274,011	39,644,782
1716.8795	Long Lead Procurements	Option 1	Process Units	16,050,885	49,105,674	33,054,789
1716.8796	ATG Spares Procurements	Option 1	Process Units	4,825,240	5,187,473	362,233
1717.8792	Self-Perform Suspense Accounts	Option 1	Process Units	318,024	726,190	408,166
1717.8793	Design Modifications	Option 1	Process Units	-	373,013	373,013
1717.8797	Unexpected Outsource Costs	Option 1	Process Units	-	192,886	192,886
1717.8798	Duty and Shipping Costs	Option 1	Process Units	-	2,461,227	2,461,227
1717.8799	REA Exposure	Option 1	Process Units	-	-	-
1717.87MA	Maintenance Program, Layout/In-Storage	Option 1	Process Units	-	340,078	340,078
1745.4500	MP Dismantling Units	Option 1	Process Units	-	-	-
1745.4510	MP Receiving & Storage Units	Option 1	Process Units	-	-	-
1745.4520	MP Ball Milling & Pneumatic Transfers	Option 1	Process Units	-	-	-
1745.4530	MP Sintering Furnaces	Option 1	Process Units	1,133,724	-	(1,133,724)
1745.4540	MP Powder & Pellets	Option 1	Process Units	-	-	-
1745.4550	MP Pellet Storage	Option 1	Process Units	-	-	-
1745.4570	MP Rods & Assemblies	Option 1	Process Units	-	-	-
1745.4580	MP Assembly Packaging Crane	Option 1	Process Units	-	-	-
1745.4590	MP Laboratories	Option 1	Process Units	-	-	-
Process Units - Direct Subtotal				\$ 345,543,884	\$ 858,791,412	\$ 513,247,529
0601.6000	Project Office Operations	Option 1	Hotel Load	\$ 6,428,099	\$ 9,225,064	\$ 2,796,965
0601.6001	Communications	Option 1	Hotel Load	4,046,177	7,137,056	3,090,879
0601.6002	Special Projects	Option 1	Hotel Load	209,586	9,995,270	9,785,684
0601.6003	Employee Incentive Program	Option 1	Hotel Load	-	113	113
0601.6004	Project Off-Site Operations	Option 1	Hotel Load	2,145,784	11,006,133	8,860,349
0601.6005	Projects Oversight	Option 1	Hotel Load	6,630,465	16,667,313	10,036,848
0601.6009	Relocations	Option 1	Hotel Load	10,730,106	38,306,079	27,575,973
0602.6010	Project Controls	Option 1	Hotel Load	23,119,500	42,470,552	19,351,052
0602.6011	Risk Management	Option 1	Hotel Load	891,857	753,578	(138,279)
0603.6020	QA Program Management & Administration	Option 1	Hotel Load	1,451,615	1,437,299	(14,316)
0603.6021	Quality Engineering	Option 1	Hotel Load	2,718,261	2,861,506	143,245
0603.6022	Audit & Surveillance	Option 1	Hotel Load	1,379,395	1,363,028	(16,367)
0603.6023	Quality Control - Labor	Option 1	Hotel Load	2,177,354	2,400,403	223,049
0603.6024	QA / QC Assembly Group Support	Option 1	Hotel Load	775,405	536,953	(238,452)
0603.6025	MOX Potential Back Charges	Option 1	Hotel Load	-	222,526	222,526
0604.6030	PS&A Administrative Support	Option 1	Hotel Load	12,594,428	40,294,967	27,700,539
0604.6031	Human Resources	Option 1	Hotel Load	15,162,029	25,211,837	10,049,808
0604.6032	Training	Option 1	Hotel Load	8,271,079	20,542,206	12,271,127

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0604.6033	Information and Personnel Security	Option 1	Hotel Load	8,404,946	18,575,630	10,170,684
0604.6034	Record Center	Option 1	Hotel Load	7,802,523	14,391,158	6,588,634
0604.6035	Internal Communication	Option 1	Hotel Load	(412,642)	134,969	547,611
0604.6036	Accounting, Treasury & Invoice Operations	Option 1	Hotel Load	12,049,569	24,577,396	12,527,827
0604.6037	Asset Management	Option 1	Hotel Load	359,916	359,715	(201)
0604.6038	Facility Management	Option 1	Hotel Load	3,635,905	22,202,181	18,566,276
0604.6039	Facility - Mini-MAC Building	Option 1	Hotel Load	-	123,501	123,501
0604.6042	PERC\$	Option 1	Hotel Load	-	818,632	818,632
0604.6045	Gateway Project	Option 1	Hotel Load	(20,000)	738,370	758,370
0604.6046	Shaw Nuclear Exchange	Option 1	Hotel Load	20,000	-	(20,000)
0604.6047	Legal Expenses	Option 1	Hotel Load	8,462,852	15,505,975	7,043,123
0604.6048	EMC Corporation Matter	Option 1	Hotel Load	1,555	1,557	2
0604.6049	952.204-77 Comp Security	Option 1	Hotel Load	873	699	(174)
0605.6040	Contract Management & Administration	Option 1	Hotel Load	16,584,091	18,569,434	1,985,343
0606.6050	Procurement	Option 1	Hotel Load	3,725,526	8,809,637	5,084,111
0606.6051	Infrastructure Procurement	Option 1	Hotel Load	4,192,508	6,141,727	1,949,219
0606.6052	Construction Procurement	Option 1	Hotel Load	5,389,184	14,836,392	9,447,208
0606.6053	Process Equipment Procurement	Option 1	Hotel Load	8,811,049	16,683,838	7,872,789
0606.6054	Process Unit Procurement	Option 1	Hotel Load	433,523	464,936	31,413
0606.6055	Property Management	Option 1	Hotel Load	4,412,654	5,335,247	922,593
0606.6056	Employment Eligibility Verifications	Option 1	Hotel Load	2,400	851	(1,549)
0606.6057	Engineered Equipment Group	Option 1	Hotel Load	498,087	8,256,992	7,758,905
0606.6058	Procurement Corrective Action NRC Commercial Grade Dedication	Option 1	Hotel Load	-	-	-
0606.6059	Procurement Support Services	Option 1	Hotel Load	-	4,960,099	4,960,099
0606.6068	S&R and Warehouses	Option 1	Hotel Load	-	31,678,298	31,678,298
0606.6069	Materials Management	Option 1	Hotel Load	227,994	5,942,192	5,714,198
0607.6060	IT Support	Option 1	Hotel Load	9,194,965	47,929,477	38,734,512
0607.6061	IT Other Direct Costs (ODCs)	Option 1	Hotel Load	15,366,220	57,883,204	42,516,984
0607.6062	Team Center Initiative	Option 1	Hotel Load	1,999,755	2,116,187	116,432
0611.6000	Project Office Operations	Option 1	Hotel Load	-	833,463	833,463
0611.6001	Communications	Option 1	Hotel Load	-	1,164,936	1,164,936
0611.6002	Special Projects	Option 1	Hotel Load	-	1,270,591	1,270,591
0611.6004	Project Off-Site Operations	Option 1	Hotel Load	-	1,224,027	1,224,027
0611.6005	Projects Oversight	Option 1	Hotel Load	-	1,716,325	1,716,325
0611.6009	Relocations	Option 1	Hotel Load	-	1,138,970	1,138,970
0611.6090	Project Systems Assessment - NNSA (OPC)	Option 1	Hotel Load	500,002	239,770	(260,232)
0611.6091	EVMS Process Improvements Development ODC (OPC)	Option 1	Hotel Load	-	18,475	18,475
0612.6010	Project Controls	Option 1	Hotel Load	-	2,913,451	2,913,451
0614.6030	Program Support and Legal Administration	Option 1	Hotel Load	-	4,555,007	4,555,007
0614.6031	Human Resources	Option 1	Hotel Load	-	493,111	493,111
0614.6032	Training	Option 1	Hotel Load	-	3,519,268	3,519,268
0614.6034	Record Center	Option 1	Hotel Load	-	1,300,316	1,300,316
0614.6036	Accounting, Treasury & Invoice Operations	Option 1	Hotel Load	-	2,876,441	2,876,441
0614.6038	Facility Management	Option 1	Hotel Load	-	1,507,135	1,507,135
0614.6047	Legal Expenses	Option 1	Hotel Load	-	1,665,825	1,665,825
0615.6040	Contract Management & Administration	Option 1	Hotel Load	-	2,043,913	2,043,913
0616.6050	Procurement	Option 1	Hotel Load	-	721,704	721,704
0616.6051	Infrastructure Procurement	Option 1	Hotel Load	-	532,976	532,976
0616.6052	Construction Procurement	Option 1	Hotel Load	-	1,654,810	1,654,810
0616.6053	Process Equipment Procurement	Option 1	Hotel Load	-	290,251	290,251
0616.6055	Property Management	Option 1	Hotel Load	-	1,305,869	1,305,869

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0616.6057	Engineered Equipment Group	Option 1	Hotel Load	-	569,012	569,012
0616.6059	Procurement Support Services	Option 1	Hotel Load	-	412,851	412,851
0616.6068	S&R and Warehouses	Option 1	Hotel Load	-	1,319,145	1,319,145
0616.6069	Materials Management	Option 1	Hotel Load	-	510,097	510,097
0617.6060	IT Support	Option 1	Hotel Load	-	6,586,251	6,586,251
0617.6061	IT Other Direct Costs (ODCs)	Option 1	Hotel Load	-	4,239,122	4,239,122
1000.8001	Management / Admin	Option 1	Hotel Load	8,574,626	20,831,188	12,256,562
1000.8002	Engineering Services Project Controls	Option 1	Hotel Load	3,588,904	9,548,015	5,959,111
1000.8003	Engineering Assurance	Option 1	Hotel Load	2,053,124	8,647,662	6,594,538
1000.8004	Technical Coordination	Option 1	Hotel Load	3,098,008	6,527,963	3,429,955
1000.8005	Document Management	Option 1	Hotel Load	819,754	3,991,953	3,172,199
1000.8006	Engineering Training	Option 1	Hotel Load	3,524,187	10,658,836	7,134,649
1001.8011	Business Travel	Option 1	Hotel Load	4,166,588	3,999,996	(166,592)
1001.8012	Temporary Assignments	Option 1	Hotel Load	125,319	10,500,723	10,375,404
1001.8019	Other ODCs	Option 1	Hotel Load	8,701,700	7,620,090	(1,081,610)
1002.8021	Supervision / Admin	Option 1	Hotel Load	1,359,305	1,349,621	(9,684)
1002.8022	Chemical	Option 1	Hotel Load	342,612	475,791	133,179
1002.8023	Mechanical	Option 1	Hotel Load	173,705	13,083	(160,622)
1002.8024	Laboratory	Option 1	Hotel Load	104,196	60,629	(43,567)
1002.8025	Balance of Plant (BOP)	Option 1	Hotel Load	21,323	37,924	16,601
1002.8026	Safety	Option 1	Hotel Load	158,936	73,015	(85,921)
1002.8027	Reference Plant Support	Option 1	Hotel Load	26,905	105,977	79,072
1003.8031	Supervision / Admin	Option 1	Hotel Load	5,030,543	4,537,192	(493,351)
1003.8032	Civil / Structural	Option 1	Hotel Load	2,691,947	40,575,130	37,883,183
1003.8034	Electrical / I&C Site Construction Support	Option 1	Hotel Load	4,801,717	29,183,333	24,381,617
1003.8035	Chemical-Construction Support	Option 1	Hotel Load	3,116,751	18,628,193	15,511,442
1003.8036	Mechanical - Construction Support	Option 1	Hotel Load	2,862,224	8,527,568	5,665,344
1003.8037	Plant Configuration Site Construction Support	Option 1	Hotel Load	5,465,749	9,041,717	3,575,968
1003.8038	Engineering Mechanics - Site Construction Support	Option 1	Hotel Load	1,588,640	20,330,086	18,741,446
1003.8042	Civil / Structural	Option 1	Hotel Load	-	-	-
1004.8041	Supervision / Admin	Option 1	Hotel Load	1,729,643	1,905,609	175,966
1004.8042	Civil / Structural	Option 1	Hotel Load	1,876,517	1,474,971	(401,547)
1004.8044	Electrical / I&C Procurement and Fabrication Support	Option 1	Hotel Load	1,194,353	2,595,894	1,401,541
1004.8046	Chemical-Procurement/Fabrication Support	Option 1	Hotel Load	6,775,218	19,644,386	12,869,168
1004.8047	Mechanical - Procurement/Fabrication Support	Option 1	Hotel Load	664,828	1,304,971	640,143
1004.8048	Plant Configuration - Construction, Procurement & Fabrication Support	Option 1	Hotel Load	2,982,901	5,747,615	2,764,714
1004.8049	Equipment Qualification	Option 1	Hotel Load	4,957,698	9,389,180	4,431,482
1005.8051	Supervision / Admin	Option 1	Hotel Load	1,046,687	649,247	(397,440)
1005.8052	Mechanical - Startup & Operations Support	Option 1	Hotel Load	4,210,942	189,407	(4,021,535)
1005.8053	Electrical / IC Startup and Operations Support	Option 1	Hotel Load	6,866,646	3,112,993	(3,753,653)
1005.8054	Civil/ Structural Startup Support	Option 1	Hotel Load	644,131	-	(644,131)
1005.8055	Engineering Mechanics Startup Support	Option 1	Hotel Load	786,719	-	(786,719)
1005.8057	Chemical/Mechanical Engineering Startup Support	Option 1	Hotel Load	2,039,416	548,121	(1,491,295)
1005.8058	Software Modifications	Option 1	Hotel Load	11,589,148	9,113	(11,580,035)
1005.8059	Plant Configuration	Option 1	Hotel Load	4,033,678	-	(4,033,678)
1006.8001	Management / Admin ODC	Option 1	Hotel Load	-	1,407,038	1,407,038
1006.8002	Project Controls OPC	Option 1	Hotel Load	-	262,767	262,767
1006.8003	Engineering Assurance ODC	Option 1	Hotel Load	-	446,932	446,932
1006.8005	Document Management	Option 1	Hotel Load	-	169,402	169,402
1006.8006	Engineering Training	Option 1	Hotel Load	-	131,226	131,226
1006.8011	Business Travel	Option 1	Hotel Load	-	5,563	5,563

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MFFF Project Cost Growth by Cost Account and Claim Category

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Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = B - A
				2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1006.8049	Engineering Mechanics	Option 1	Hotel Load	-	925,155	925,155
1006.8052	Process Unit Responsible Engineer Startup Support	Option 1	Hotel Load	-	3,949,689	3,949,689
1006.8053	Electrical / IC Startup Support	Option 1	Hotel Load	-	3,540,890	3,540,890
1006.8054	Civil/ Structural Startup Support	Option 1	Hotel Load	-	1,226,667	1,226,667
1006.8055	Engineering Mechanics Startup Support	Option 1	Hotel Load	-	1,721,000	1,721,000
1006.8057	Chemical/ Mechanical Engineering Startup Support	Option 1	Hotel Load	-	5,571,346	5,571,346
1006.8059	Plant Configuration	Option 1	Hotel Load	-	1,136,403	1,136,403
1100.8101	Management / Administration	Option 1	Hotel Load	1,496,757	2,227,893	731,136
1100.8102	NSA Project Controls	Option 1	Hotel Load	1,026,391	1,491,371	464,980
1101.8111	Business Travel	Option 1	Hotel Load	947,994	504,806	(443,188)
1101.8112	Temporary Assignments	Option 1	Hotel Load	178,491	55,790	(122,701)
1101.8119	Other ODCs (Legal & S/C Costs)	Option 1	Hotel Load	1,470,334	1,622,276	151,942
1102.8121	Defense of Licensing Basis	Option 1	Hotel Load	7,263,816	11,460,643	4,196,827
1102.8122	Compliance Program	Option 1	Hotel Load	3,412,700	2,054,829	(1,357,871)
1102.8123	Condition Reports Work Resolution	Option 1	Hotel Load	-	205,042	205,042
1103.8132	Chemical Safety Support	Option 1	Hotel Load	971,851	4,012,744	3,040,893
1103.8133	Laboratory Support	Option 1	Hotel Load	332,617	210,173	(122,444)
1104.8141	ES&H Program	Option 1	Hotel Load	219,560	1,229,596	1,010,036
1104.8142	Radiological Protection	Option 1	Hotel Load	13,298	5,869	(7,429)
1104.8143	Environmental Protection Program	Option 1	Hotel Load	713,022	823,040	110,018
1104.8144	Industrial Safety Program	Option 1	Hotel Load	380,343	638,299	257,956
1104.8145	Waste Management Program	Option 1	Hotel Load	(50,533)	334,145	384,678
1104.8146	Fitness for Duty Program	Option 1	Hotel Load	(216,463)	515,082	731,545
1104.8147	Emergency Response Program	Option 1	Hotel Load	80,657	94,698	14,041
1104.8148	Employee Safety Incentive Program	Option 1	Hotel Load	81,139	79,977	(1,162)
1104.8149	Construction - Safety Engineering Support	Option 1	Hotel Load	233,618	459,000	225,382
1105.8151	Criticality Safety Procurement & Const Support	Option 1	Hotel Load	81,672	4,035,676	3,954,004
1105.8154	Nuclear Radiation Protections	Option 1	Hotel Load	73,973	2,291,377	2,217,404
1105.8155	Nuclear Radiation & Criticality Monitoring	Option 1	Hotel Load	-	1,793	1,793
1106.8161	Defense of the Safety Basis	Option 1	Hotel Load	1,367,960	4,087,071	2,719,111
1109.8191	NRC Costs	Option 1	Hotel Load	18,764,920	57,777,922	39,013,002
1109.8192	Physical Security Program	Option 1	Hotel Load	75,562,597	12,193,107	(63,369,490)
1109.8193	Material Control & Accountability Program	Option 1	Hotel Load	13,490,799	13,452,777	(38,022)
1110.8101	Management / Administration	Option 1	Hotel Load	-	226,869	226,869
1110.8102	Project Controls	Option 1	Hotel Load	-	102,632	102,632
1112.8121	Defense of Licensing Basis	Option 1	Hotel Load	-	1,524,420	1,524,420
1113.8132	Chemical Safety Support	Option 1	Hotel Load	-	567,575	567,575
1115.8151	Criticality Safety Procurement & Const Support	Option 1	Hotel Load	-	951,357	951,357
1115.8154	Nuclear Radiation Protections	Option 1	Hotel Load	-	329,182	329,182
1116.8161	Defense of the Safety Basis	Option 1	Hotel Load	-	493,859	493,859
1802.8820	Supplies & Services	Option 1	Hotel Load	354,576	2,167,694	1,813,118
1802.8821	Office Equipment, Furniture Leases & Purchases	Option 1	Hotel Load	2,924,041	4,278,754	1,354,713
1803.8830	Temporary Site Features & Services	Option 1	Hotel Load	128,086	518,980	390,894
1803.8832	Buildings Shops / Trailers	Option 1	Hotel Load	15,839,261	22,521,397	6,682,136
1803.8833	Utilities & Services	Option 1	Hotel Load	14,684,284	45,585,905	30,901,621
1803.8850	Misc Field Construction Supplies	Option 1	Hotel Load	-	-	-
1804.8840	Equipment	Option 1	Hotel Load	12,689,446	43,706,780	31,017,334
1804.8842	Construction Materials Management	Option 1	Hotel Load	209,481	5,794,327	5,584,846
1804.8843	Tools	Option 1	Hotel Load	223,651	754,407	530,756
1804.8850	Temporary Site Features & Services	Option 1	Hotel Load	-	-	-
1805.8850	Miscellaneous Field Supplies & Services	Option 1	Hotel Load	17,474,277	72,941,704	55,467,427

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Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = B - A
				2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1805.8851	Foreign National Escorts	Option 1	Hotel Load	3,240,702	-	(3,240,702)
2000.9001	Management / Administration	Option 1	Hotel Load	7,999,319	12,719,516	4,720,197
2000.9002	Project Controls	Option 1	Hotel Load	1,319,146	1,844,714	525,568
2001.9014	Test Equipment & Consumables	Option 1	Hotel Load	1,762,350	1,910,308	147,958
2002.9021	Generic Test Documents	Option 1	Hotel Load	80,437	143,702	63,265
2002.9024	Technical Support	Option 1	Hotel Load	-	139,892	139,892
2002.9026	Cold Startup Training	Option 1	Hotel Load	1,348,758	1,211,069	(137,689)
2004.9047	Turnover & Logistics	Option 1	Hotel Load	-	2,852,716	2,852,716
2006.9060	Maintenance Program, Layup/In-Storage	Option 1	Hotel Load	-	4,473,849	4,473,849
2010.9101	Management / Administration - IPT	Option 1	Hotel Load	-	31,409,273	31,409,273
2010.9102	Project Controls - IPT	Option 1	Hotel Load	-	4,389,193	4,389,193
2010.9103	Program Support for Start-up	Option 1	Hotel Load	-	3,425,955	3,425,955
2011.9117	Spare Parts - IPT	Option 1	Hotel Load	-	3,630,728	3,630,728
2012.9124	Technical Support - IPT	Option 1	Hotel Load	-	2,130,381	2,130,381
2012.9126	Cold Startup Training - IPT	Option 1	Hotel Load	-	6,130,662	6,130,662
2100.9501	Management / Administration	Option 1	Hotel Load	22,539,333	22,482,010	(57,323)
2100.9502	Project Controls	Option 1	Hotel Load	3,957,266	4,341,736	384,470
2100.9503	Quality Assurance	Option 1	Hotel Load	-	-	-
2100.9504	Environment, Safety & Health	Option 1	Hotel Load	-	-	-
2100.9506	PS&A	Option 1	Hotel Load	(0)	-	0
2101.9511	Business Travel	Option 1	Hotel Load	2,134,842	2,028,587	(106,255)
2101.9512	Temporary Assignments	Option 1	Hotel Load	3,183,717	6,462,252	3,278,535
2101.9515	Consumables	Option 1	Hotel Load	-	2,438,200	2,438,200
2101.9518	Software	Option 1	Hotel Load	4,114,132	3,954,314	(159,818)
2102.9522	Training at Richland	Option 1	Hotel Load	2,863,086	1,182,981	(1,680,105)
2102.9523	Training at LaHague	Option 1	Hotel Load	48,189,683	3,675,088	(44,514,595)
2102.9524	Training at Melox	Option 1	Hotel Load	64,791,905	5,648,433	(59,143,472)
2102.9525	Other Training	Option 1	Hotel Load	66,704,236	85,723	(66,618,513)
2102.9526	Operations Activities	Option 1	Hotel Load	(1,222,760)	157,198	1,379,958
2102.9527	Operations Process Simulator	Option 1	Hotel Load	8,646,253	1,584,317	(7,061,936)
2102.9528	Reference Plant Training Direct Costs	Option 1	Hotel Load	(8,646,253)	108,059,327	116,705,580
2103.9531	Organizational Documents	Option 1	Hotel Load	1,141,455	4,215,983	3,074,528
2103.9532	Laboratory Procedures	Option 1	Hotel Load	4,252,295	2,677,948	(1,574,347)
2103.9533	Maintenance Procedures	Option 1	Hotel Load	4,612,425	4,593,634	(18,791)
2103.9534	Operating Procedures	Option 1	Hotel Load	10,763,793	8,148,158	(2,615,635)
2103.9535	Hot Startup Planning	Option 1	Hotel Load	373,242	1,121,733	748,491
2103.9536	Turnover to Operations	Option 1	Hotel Load	454,344	-	(454,344)
2103.9537	Support to Other groups	Option 1	Hotel Load	920,976	7,136,528	6,215,552
2104.9541	Early Option 2 Proposal Development (Labor)	Option 1	Hotel Load	-	672,700	672,700
2105.9550	Aqueous Polishing Activities	Option 1	Hotel Load	259,640	3,216,088	2,956,448
2105.9551	Powder Pellet Activities	Option 1	Hotel Load	173,085	6,619,357	6,446,272
2105.9552	Rod Bundle Activities	Option 1	Hotel Load	129,730	2,473,008	2,343,278
2105.9553	Balance of Plant Activities	Option 1	Hotel Load	167,995	6,595,420	6,427,425
2105.9554	Laboratory Activities	Option 1	Hotel Load	-	14,901,345	14,901,345
2105.9555	Maintenance Activities	Option 1	Hotel Load	320,048	31,130,877	30,810,829
2105.9556	Logistics / Warehousing	Option 1	Hotel Load	-	2,675,586	2,675,586
2105.9557	System Engineering Activities	Option 1	Hotel Load	172,262	12,540,813	12,368,551
2201.8138	Relocation	Option 1	Hotel Load	-	20,912	20,912
2201.8141	ES&H Program	Option 1	Hotel Load	1,473,688	8,149,431	6,675,743
2201.8143	Environmental Protection Program	Option 1	Hotel Load	1,134,848	5,433,744	4,298,896
2201.8144	Industrial Safety Program	Option 1	Hotel Load	995,294	930,909	(64,385)

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MFFF Project Cost Growth by Cost Account and Claim Category

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Cost Account	Cost Account Description	Contract	Claim Category	[A]		[B]		[C] = B - A	
				2007 Baseline		2012 Rebaseline with Addendum		Cost Growth	
2201.8145	Waste Management Program	Option 1	Hotel Load		924,451		3,318,918		2,394,467
2201.8146	Fitness for Duty Program	Option 1	Hotel Load		1,836,793		1,379,366		(457,427)
2201.8147	Emergency Preparedness Program	Option 1	Hotel Load		1,565,817		1,640,343		74,526
2201.8148	Employee Safety Incentive Program	Option 1	Hotel Load		519,249		1,053,890		534,641
2201.8149	ES & H Safety Engineer	Option 1	Hotel Load		1,783,459		11,290,726		9,507,267
2201.8150	Field Office Supplies	Option 1	Hotel Load		-		5,499		5,499
2201.8820	Field Office Supplies	Option 1	Hotel Load		171,293		90,217		(81,076)
2202.8141	ES&H Program	Option 1	Hotel Load		-		1,232,710		1,232,710
2202.8143	Environmental Protection Program	Option 1	Hotel Load		-		949,660		949,660
2202.8145	Waste Management Program	Option 1	Hotel Load		-		693,898		693,898
2202.8147	Emergency Response Program	Option 1	Hotel Load		-		599,081		599,081
2202.8148	Employee Safety Incentive Program	Option 1	Hotel Load		-		177,741		177,741
2202.8149	ES & H Safety Engineer	Option 1	Hotel Load		-		2,101,834		2,101,834
2202.9504	Radiological Protection Early Start Up	Option 1	Hotel Load		15,267,591		15,591,116		323,525
Process Units - Hotel Load Subtotal					\$ 799,014,425		\$ 1,612,646,690		\$ 813,632,265
1000.8037	Mechanical – Construction Support	Option 1	MFFF Construction - Title III Engineering	\$	-	\$	-	\$	-
1003.8032	Civil / Structural	Option 1	MFFF Construction - Title III Engineering		3,786,460		21,309,941		17,523,481
1003.8034	Electrical / I&C Site Construction Support	Option 1	MFFF Construction - Title III Engineering		9,085,875		26,236,366		17,150,490
1003.8035	Chemical-Construction Support	Option 1	MFFF Construction - Title III Engineering		4,589,292		7,654,227		3,064,935
1003.8036	Mechanical – Construction Support	Option 1	MFFF Construction - Title III Engineering		1,259,111		5,993,434		4,734,323
1003.8037	Plant Configuration Site Construction Support	Option 1	MFFF Construction - Title III Engineering		11,694,072		24,406,806		12,712,734
1003.8038	Engineering Mechanics - Site Construction Support	Option 1	MFFF Construction - Title III Engineering		1,100,594		1,889,064		788,470
1004.8040	Responsible Engineer Process Unit Fabrication Support	Option 1	MFFF Construction - Title III Engineering		-		-		-
1004.8044	Electrical / I&C Procurement and Fabrication Support	Option 1	MFFF Construction - Title III Engineering		(145,000)		2,589		147,589
1004.8046	Chemical-Procurement/Fabrication Support	Option 1	MFFF Construction - Title III Engineering		(474,839)		3,032,980		3,507,819
1004.8047	Mechanical – Procurement/Fabrication Support	Option 1	MFFF Construction - Title III Engineering		324,345		319,072		(5,273)
1005.8052	Mechanical – Startup & Operations Support	Option 1	MFFF Construction - Title III Engineering		1,090,249		300,099		(790,150)
1005.8053	Electrical / IC Startup and Operations Support	Option 1	MFFF Construction - Title III Engineering		366,145		-		(366,145)
1005.8054	Civil/ Structural Startup Support	Option 1	MFFF Construction - Title III Engineering		-		-		-
1005.8057	Chemical/Mechanical Engineering Startup Support	Option 1	MFFF Construction - Title III Engineering		272,356		120,575		(151,781)
1007.8071	Chemical Related Engineered Equipment	Option 1	MFFF Construction - Title III Engineering		-		-		-
1007.8072	Electrical Related Engineered Equipment	Option 1	MFFF Construction - Title III Engineering		-		-		-
1007.8073	Instrumentation & Control Related Engineered Equipment	Option 1	MFFF Construction - Title III Engineering		-		-		-
1007.8074	HVAC Related Engineered Equipment	Option 1	MFFF Construction - Title III Engineering		-		-		-
1007.8075	Miscellaneous Engineered Equipment	Option 1	MFFF Construction - Title III Engineering		-		-		-
MFFF Construction - Title III Engineering Subtotal					\$ 32,948,661		\$ 91,265,151		\$ 58,316,491
1721.2101	Site Preparation	Option 1	MFFF Construction - Installation/Materials	\$	29,136,316	\$	29,492,485	\$	356,169
1722.2201	Roads & Parking	Option 1	MFFF Construction - Installation/Materials		1,853,353		1,770,466		(82,887)
1722.2202	F" Road"	Option 1	MFFF Construction - Installation/Materials		5,529,770		3,767,924		(1,761,846)
1723.2301	Yard Structures	Option 1	MFFF Construction - Installation/Materials		2,222,753		3,861,339		1,638,586
1723.2501		Option 1	MFFF Construction - Installation/Materials		-		-		-
1724.2401	Underground Utilities	Option 1	MFFF Construction - Installation/Materials		10,809,194		21,315,647		10,506,454
1725.2501	Yard Fire Protection	Option 1	MFFF Construction - Installation/Materials		2,374,082		3,091,847		717,765
1726.2601	Chillers	Option 1	MFFF Construction - Installation/Materials		3,996,349		6,597,688		2,601,339
1727.2701	Site Security and Perimeter Intrusion Detection and Assessment System	Option 1	MFFF Construction - Installation/Materials		33,756,358		46,557,859		12,801,501
1728.2801	Yard Electrical & Lighting	Option 1	MFFF Construction - Installation/Materials		6,479,079		6,076,996		(402,083)
1729.2901	Landscaping	Option 1	MFFF Construction - Installation/Materials		438,164		334,321		(103,843)
1731.3150	Administration Building	Option 1	MFFF Construction - Installation/Materials		8,158,478		11,047,671		2,889,193
1732.3250	Receiving Warehouse Building	Option 1	MFFF Construction - Installation/Materials		2,342,535		1,257,230		(1,085,305)

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				2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1732.3550	Standby Diesel Generator Building	Option 1	MFFF Construction - Installation/Materials	1	-	(1)
1733.3350	Secured Warehouse Building	Option 1	MFFF Construction - Installation/Materials	3,768,379	4,429,712	661,333
1734.3450	Tech Support & Access Control Building	Option 1	MFFF Construction - Installation/Materials	7,129,799	20,551,164	13,421,365
1735.3550	Standby Diesel Generator Building	Option 1	MFFF Construction - Installation/Materials	3,573,745	-	(3,573,745)
1735.3556	Standby Diesel Generator System/Equip.	Option 1	MFFF Construction - Installation/Materials	-	-	-
1736.3652	Civil / Structural / Architectural	Option 1	MFFF Construction - Installation/Materials	1,234,783	12,694,518	11,459,735
1736.3653	Mechanical / Piping	Option 1	MFFF Construction - Installation/Materials	1,519,602	5,681,459	4,161,857
1736.3654	Electrical	Option 1	MFFF Construction - Installation/Materials	2,419,944	12,245,457	9,825,513
1736.3655	I&C	Option 1	MFFF Construction - Installation/Materials	386,727	672,465	285,738
1736.3656	Emerg.Diesel Gen.System/Equipment	Option 1	MFFF Construction - Installation/Materials	7,797,805	10,668,334	2,870,529
1737.3751	MFFF Construction - Installation/Materials	Option 1	MFFF Construction - Installation/Materials	1,400,000	3,061,059	1,661,059
1737.3752	Civil / Structural / Architectural	Option 1	MFFF Construction - Installation/Materials	1,852,989	2,335,417	482,428
1737.3753	Mechanical / Piping	Option 1	MFFF Construction - Installation/Materials	7,584,611	2,577,658	(5,006,953)
1737.3754	Electrical	Option 1	MFFF Construction - Installation/Materials	3,535,409	916,676	(2,618,733)
1737.3755	I&C	Option 1	MFFF Construction - Installation/Materials	5,243,898	58,855	(5,185,043)
1737.3756	Reagent Systems Equipment / Piping	Option 1	MFFF Construction - Installation/Materials	824,061	9,741,737	8,917,676
1741.4100	Building Structure	Option 1	MFFF Construction - Installation/Materials	42,141,101	48,980,823	6,839,722
1741.4110	Architectural Features	Option 1	MFFF Construction - Installation/Materials	1,286,559	12,573,673	11,287,114
1741.4120	HVAC	Option 1	MFFF Construction - Installation/Materials	5,143,021	36,376,411	31,233,390
1741.4130	MOX Processing Area (BMP) – MOX Processing Area – Level 1 – Fire Pro	Option 1	MFFF Construction - Installation/Materials	5,210,678	12,698,949	7,488,272
1741.4140	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	4,467,807	2,083,905	(2,383,902)
1741.4150	Process Piping	Option 1	MFFF Construction - Installation/Materials	14,137,249	17,941,478	3,804,229
1741.4170	Other Equipment	Option 1	MFFF Construction - Installation/Materials	7,913,483	7,094,780	(818,703)
1741.4180	Electrical	Option 1	MFFF Construction - Installation/Materials	12,710,594	47,210,472	34,499,878
1741.4190	Instrumentation	Option 1	MFFF Construction - Installation/Materials	13,114,418	2,734,549	(10,379,870)
1742.4200	Building Structure	Option 1	MFFF Construction - Installation/Materials	22,770,514	35,620,852	12,850,338
1742.4210	Architectural Features	Option 1	MFFF Construction - Installation/Materials	(191,335)	4,607,399	4,798,734
1742.4220	HVAC	Option 1	MFFF Construction - Installation/Materials	7,638,103	20,971,266	13,333,163
1742.4230	MOX Processing Area (BMP) – MOX Processing Area – Level 2 – Fire Pro	Option 1	MFFF Construction - Installation/Materials	6,021,572	14,596,534	8,574,962
1742.4240	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	1,220,714	42,641	(1,178,073)
1742.4250	Process Piping	Option 1	MFFF Construction - Installation/Materials	7,971,156	11,361,603	3,390,447
1742.4270	Other Equipment	Option 1	MFFF Construction - Installation/Materials	2,454,660	2,570,349	115,689
1742.4280	Electrical	Option 1	MFFF Construction - Installation/Materials	14,912,858	29,359,393	14,446,535
1742.4290	Instrumentation	Option 1	MFFF Construction - Installation/Materials	7,707,535	1,728,847	(5,978,688)
1742.4600	Fuel Assembly / Rods	Option 1	MFFF Construction - Installation/Materials	(167)	-	167
1743.4300	Building Structure	Option 1	MFFF Construction - Installation/Materials	-	28,748,394	28,748,394
1743.4310	Architectural Features	Option 1	MFFF Construction - Installation/Materials	215,717	5,178,527	4,962,810
1743.4320	HVAC	Option 1	MFFF Construction - Installation/Materials	15,793,051	36,243,152	20,450,100
1743.4330	MOX Processing Area (BMP) – MOX Processing Area – Level 3 – Fire Pro	Option 1	MFFF Construction - Installation/Materials	6,408,576	9,592,492	3,183,916
1743.4340	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	1,757,160	104,868	(1,652,292)
1743.4350	Process Piping	Option 1	MFFF Construction - Installation/Materials	14,311,410	14,276,183	(35,227)
1743.4370	Other Equipment	Option 1	MFFF Construction - Installation/Materials	114,045	1,178,593	1,064,548
1743.4380	Electrical	Option 1	MFFF Construction - Installation/Materials	14,716,737	33,580,847	18,864,110
1743.4390	Instrumentation	Option 1	MFFF Construction - Installation/Materials	18,198,930	19,678,197	1,479,267
1744.4400	Building Structure	Option 1	MFFF Construction - Installation/Materials	837,780	12,198,268	11,360,488
1744.4410	Architectural Features	Option 1	MFFF Construction - Installation/Materials	79,148	-	(79,148)
1744.4420	HVAC	Option 1	MFFF Construction - Installation/Materials	353,456	2,882,398	2,528,942
1744.4430	MOX Processing Area (BMP) – MOX Processing Area – Level 4 – Fire Pr	Option 1	MFFF Construction - Installation/Materials	249,976	83,530	(166,446)
1744.4440	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	581,867	610,698	28,831
1744.4480	Electrical	Option 1	MFFF Construction - Installation/Materials	78,559	946,936	868,377
1744.4490	Instrumentation	Option 1	MFFF Construction - Installation/Materials	(39,748)	52,684	92,432

CB&I AREVA MOX Services, LLC.
MFFF Project Cost Growth by Cost Account and Claim Category

Schedule 6.11

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = B - A
				2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1746.4600	Fuel Assembly / Rods	Option 1	MFFF Construction - Installation/Materials	4,898,683	4,513,528	(385,155)
1746.4610	Powder & Pellets	Option 1	MFFF Construction - Installation/Materials	18,241,062	13,852,934	(4,388,128)
1746.4620	Furnaces & Pellet Storage	Option 1	MFFF Construction - Installation/Materials	3,989,918	3,217,081	(772,837)
1746.4630	PuO2 Receiving, Storage & Decanning	Option 1	MFFF Construction - Installation/Materials	3,434,938	1,593,800	(1,841,138)
1746.4640	Labs & Testing	Option 1	MFFF Construction - Installation/Materials	36,210,885	35,673,183	(537,702)
1751.5100	Building Structure	Option 1	MFFF Construction - Installation/Materials	18,030,779	21,310,875	3,280,096
1751.5110	Architectural Features	Option 1	MFFF Construction - Installation/Materials	205,275	7,294,497	7,089,222
1751.5120	HVAC	Option 1	MFFF Construction - Installation/Materials	2,289,145	8,716,658	6,427,513
1751.5130	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 1 –	Option 1	MFFF Construction - Installation/Materials	1,247,530	1,801,582	554,052
1751.5140	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	3,277,473	1,933,426	(1,344,046)
1751.5150	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	20,664,387	63,273,713	42,609,326
1751.5170	Other Equipment	Option 1	MFFF Construction - Installation/Materials	998,403	2,006,893	1,008,490
1751.5180	Electrical	Option 1	MFFF Construction - Installation/Materials	2,199,273	17,201,810	15,002,537
1751.5190	Instrumentation	Option 1	MFFF Construction - Installation/Materials	2,886,311	776,284	(2,110,026)
1751.5250		Option 1	MFFF Construction - Installation/Materials	-	-	-
1751.5700		Option 1	MFFF Construction - Installation/Materials	-	-	-
1752.5200	Building Structure	Option 1	MFFF Construction - Installation/Materials	5,326,583	9,451,743	4,125,160
1752.5210	Architectural Features	Option 1	MFFF Construction - Installation/Materials	(11,660)	1,248,731	1,260,391
1752.5220	HVAC	Option 1	MFFF Construction - Installation/Materials	3,076,650	5,815,594	2,738,943
1752.5230	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 2 –	Option 1	MFFF Construction - Installation/Materials	772,172	1,481,053	708,881
1752.5240	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	799,083	668,407	(130,676)
1752.5250	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	22,325,326	103,387,615	81,062,289
1752.5270	Other Equipment	Option 1	MFFF Construction - Installation/Materials	1,739,491	451,468	(1,288,023)
1752.5280	Electrical	Option 1	MFFF Construction - Installation/Materials	4,274,729	14,240,247	9,965,518
1752.5290	Instrumentation	Option 1	MFFF Construction - Installation/Materials	3,457,434	979,949	(2,477,485)
1753.5300	Building Structure	Option 1	MFFF Construction - Installation/Materials	7,043,044	18,004,541	10,961,497
1753.5310	Architectural Features	Option 1	MFFF Construction - Installation/Materials	(7,882)	1,752,632	1,760,514
1753.5320	HVAC	Option 1	MFFF Construction - Installation/Materials	2,842,768	5,006,959	2,164,191
1753.5330	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 3 –	Option 1	MFFF Construction - Installation/Materials	803,128	1,850,451	1,047,323
1753.5340	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	570,699	240,601	(330,098)
1753.5350	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	12,311,041	15,128,246	2,817,205
1753.5370	Other Equipment	Option 1	MFFF Construction - Installation/Materials	6,140	729,933	723,793
1753.5380	Electrical	Option 1	MFFF Construction - Installation/Materials	8,088,441	16,393,472	8,305,031
1753.5390	Instrumentation	Option 1	MFFF Construction - Installation/Materials	4,125,471	1,390,017	(2,735,454)
1754.5400	Building Structure	Option 1	MFFF Construction - Installation/Materials	-	5,868,741	5,868,741
1754.5410	Architectural Features	Option 1	MFFF Construction - Installation/Materials	27,732	1,700,960	1,673,228
1754.5420	HVAC	Option 1	MFFF Construction - Installation/Materials	2,895,119	4,469,887	1,574,769
1754.5430	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 4 –	Option 1	MFFF Construction - Installation/Materials	987,070	2,143,927	1,156,857
1754.5440	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	1,509,067	1,364,002	(145,065)
1754.5450	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	10,269,733	15,901,164	5,631,431
1754.5470	Other Equipment	Option 1	MFFF Construction - Installation/Materials	585,252	503,476	(81,776)
1754.5480	Electrical	Option 1	MFFF Construction - Installation/Materials	4,732,941	16,215,664	11,482,723
1754.5490	Instrumentation	Option 1	MFFF Construction - Installation/Materials	7,283,214	814,419	(6,468,795)
1754.5540	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	2,231	-	(2,231)
1755.5500	Building Structure	Option 1	MFFF Construction - Installation/Materials	-	10,560,583	10,560,583
1755.5510	Architectural Features	Option 1	MFFF Construction - Installation/Materials	130,702	2,112,694	1,981,992
1755.5520	HVAC	Option 1	MFFF Construction - Installation/Materials	3,234,191	9,439,141	6,204,950
1755.5530	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 5 –	Option 1	MFFF Construction - Installation/Materials	1,653,686	1,390,009	(263,677)
1755.5540	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	2,235,565	2,042,028	(193,537)
1755.5550	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	12,301,514	9,663,694	(2,637,820)
1755.5570	Other Equipment	Option 1	MFFF Construction - Installation/Materials	353,332	213,102	(140,230)

CB&I AREVA MOX Services, LLC.
MFFF Project Cost Growth by Cost Account and Claim Category

Schedule 6.11

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = B - A
				2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1755.5580	Electrical	Option 1	MFFF Construction - Installation/Materials	3,703,393	13,361,396	9,658,003
1755.5590	Instrumentation	Option 1	MFFF Construction - Installation/Materials	13,320,716	15,438,044	2,117,327
1756.5600	Building Structure	Option 1	MFFF Construction - Installation/Materials	6,165,298	5,340,300	(824,998)
1756.5670	Other Equipment	Option 1	MFFF Construction - Installation/Materials	3,829,080	-	(3,829,080)
1756.5680	Electrical	Option 1	MFFF Construction - Installation/Materials	-	187,169	187,169
1756.5690	Instrumentation	Option 1	MFFF Construction - Installation/Materials	-	10,436	10,436
1757.5730	PAF	Option 1	MFFF Construction - Installation/Materials	-	35,808	35,808
1758.5810	Mechanical Systems	Option 1	MFFF Construction - Installation/Materials	12,540,902	11,156,856	(1,384,046)
1758.5850	Chemical Systems	Option 1	MFFF Construction - Installation/Materials	2,438,555	7,082,040	4,643,485
1761.6100	Building Structure	Option 1	MFFF Construction - Installation/Materials	18,229,486	21,483,846	3,254,360
1761.6110	Architectural Features	Option 1	MFFF Construction - Installation/Materials	2,028,305	4,960,379	2,932,074
1761.6120	HVAC	Option 1	MFFF Construction - Installation/Materials	1,435,517	4,364,621	2,929,105
1761.6130	Shipping and Receiving Area (BSR) – Shipping and Receiving Area – Le	Option 1	MFFF Construction - Installation/Materials	1,605,863	1,443,333	(162,529)
1761.6140	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	1,406,932	948,598	(458,335)
1761.6150	Process Piping	Option 1	MFFF Construction - Installation/Materials	330,741	1,199,682	868,941
1761.6170	Other Equipment	Option 1	MFFF Construction - Installation/Materials	258,851	358,450	99,599
1761.6180	Electrical	Option 1	MFFF Construction - Installation/Materials	9,717,335	9,076,335	(641,000)
1761.6190	Instrumentation	Option 1	MFFF Construction - Installation/Materials	468,092	1,093,509	625,417
1762.6200	Building Structure	Option 1	MFFF Construction - Installation/Materials	6,002,734	11,030,640	5,027,906
1762.6210	Architectural Features	Option 1	MFFF Construction - Installation/Materials	35,534	808,993	773,459
1762.6220	HVAC	Option 1	MFFF Construction - Installation/Materials	2,833,861	7,875,915	5,042,054
1762.6230	Shipping and Receiving Area (BSR) – Shipping and Receiving Area – Le	Option 1	MFFF Construction - Installation/Materials	1,254,324	1,448,395	194,071
1762.6240	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	107,201	20,100	(87,101)
1762.6250	Process Piping	Option 1	MFFF Construction - Installation/Materials	186,238	311,367	125,129
1762.6270	Other Equipment	Option 1	MFFF Construction - Installation/Materials	-	34,875	34,875
1762.6280	Electrical	Option 1	MFFF Construction - Installation/Materials	2,433,971	5,336,801	2,902,830
1762.6290	Instrumentation	Option 1	MFFF Construction - Installation/Materials	120,382	334,483	214,102
1763.6300	Building Structure	Option 1	MFFF Construction - Installation/Materials	-	5,600,636	5,600,636
1763.6310	Architectural Features	Option 1	MFFF Construction - Installation/Materials	477,402	1,669,516	1,192,114
1763.6320	HVAC	Option 1	MFFF Construction - Installation/Materials	2,563,310	7,568,000	5,004,690
1763.6330	Shipping and Receiving Area (BSR) – Shipping and Receiving Area – Le	Option 1	MFFF Construction - Installation/Materials	1,755,869	1,659,212	(96,657)
1763.6340	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	146,215	58,334	(87,881)
1763.6350	Process Piping	Option 1	MFFF Construction - Installation/Materials	45,070	863,815	818,745
1763.6370	Other Equipment	Option 1	MFFF Construction - Installation/Materials	7,331	105,520	98,189
1763.6380	Electrical	Option 1	MFFF Construction - Installation/Materials	1,079,778	8,730,876	7,651,098
1763.6390	Instrumentation	Option 1	MFFF Construction - Installation/Materials	1,591,341	1,779,241	187,901
1764.6400	Building Structure	Option 1	MFFF Construction - Installation/Materials	-	3,072,441	3,072,441
1764.6470	Other Equipment	Option 1	MFFF Construction - Installation/Materials	6,602	-	(6,602)
1764.6480	Electrical	Option 1	MFFF Construction - Installation/Materials	-	186,341	186,341
1764.6490	Instrumentation	Option 1	MFFF Construction - Installation/Materials	-	10,457	10,457
1771.7100	Building Structure	Option 1	MFFF Construction - Installation/Materials	7,436,315	8,425,791	989,476
1771.7110	Architectural Features	Option 1	MFFF Construction - Installation/Materials	7,146,295	1,420,056	(5,726,239)
1771.7120	HVAC	Option 1	MFFF Construction - Installation/Materials	927,006	4,359,752	3,432,746
1771.7130	Fire Protection	Option 1	MFFF Construction - Installation/Materials	2,988	-	(2,988)
1771.7140	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	8,055	35,057	27,002
1771.7170	Other Equipment	Option 1	MFFF Construction - Installation/Materials	328	-	(328)
1771.7180	Electrical	Option 1	MFFF Construction - Installation/Materials	3,131,063	1,682,127	(1,448,936)
1771.7190	Instrumentation	Option 1	MFFF Construction - Installation/Materials	231,865	86,625	(145,240)
1772.7200	Building Structure	Option 1	MFFF Construction - Installation/Materials	25,824,745	39,222,116	13,397,371
1772.7210	Architectural Features	Option 1	MFFF Construction - Installation/Materials	1,068,385	31,026,898	29,958,513
1772.7270	Other Equipment	Option 1	MFFF Construction - Installation/Materials	274,440	113,238	(161,202)

CB&I AREVA MOX Services, LLC.
MFFF Project Cost Growth by Cost Account and Claim Category

Schedule 6.11

Cost Account	Cost Account Description	Contract	Claim Category	[A]		[B]		[C] = B - A	
				2007 Baseline		2012 Rebaseline with Addendum		Cost Growth	
1772.7280	Electrical	Option 1	MFFF Construction - Installation/Materials	1,039,438		1,091,331		51,893	
1774.7401	Subcontractor Project Management/Project Controls	Option 1	MFFF Construction - Installation/Materials	6,598,306		72,846,805		66,248,499	
1774.7402	Subcontractor Project Administration/Accounting	Option 1	MFFF Construction - Installation/Materials	-		-		-	
1774.7403	Subcontractor Quality Assurance / Quality Control	Option 1	MFFF Construction - Installation/Materials	-		-		-	
1774.7404	Subcontractor Environmental, Safety and Health	Option 1	MFFF Construction - Installation/Materials	-		3		3	
1774.7405	Subcontractor Home Office Support	Option 1	MFFF Construction - Installation/Materials	-		-		-	
1774.7406	Subcontractor Mobilization	Option 1	MFFF Construction - Installation/Materials	437,300		859,829		422,528	
1774.7407	Subcontractor Demobilization	Option 1	MFFF Construction - Installation/Materials	26,800		580,131		553,331	
1774.7408	Dewatering, Erosion and Sedimentation Control	Option 1	MFFF Construction - Installation/Materials	176,470		176,470		(0)	
1774.7409	Equipment Rental (Including Vehicles)	Option 1	MFFF Construction - Installation/Materials	2,356,013		20,944,738		18,588,725	
1774.7410	Miscellaneous Procured Services	Option 1	MFFF Construction - Installation/Materials	225,600		1,447,138		1,221,538	
1774.7411	Consumables and Expendable Materials	Option 1	MFFF Construction - Installation/Materials	775,267		4,263,877		3,488,610	
1774.7412	Performance Bond	Option 1	MFFF Construction - Installation/Materials	871,448		1,107,034		235,586	
1774.7413	Tools	Option 1	MFFF Construction - Installation/Materials	196,633		387,367		190,734	
1774.7414	Craft Distributable and Indirect Costs	Option 1	MFFF Construction - Installation/Materials	3,766,887		14,124,171		10,357,284	
1774.7415	Concrete Batch Plant	Option 1	MFFF Construction - Installation/Materials	3,778,207		3,778,185		(22)	
1774.7416	Independent Test Lab	Option 1	MFFF Construction - Installation/Materials	1,018,992		1,887,424		868,432	
1774.7417	NDE Testing	Option 1	MFFF Construction - Installation/Materials	874,858		904,226		29,368	
1774.7418	Craft Support for MFFF Construction	Option 1	MFFF Construction - Installation/Materials	1,445,077		23,870,675		22,425,598	
1774.7419	Construction Distributables - Misc	Option 1	MFFF Construction - Installation/Materials	8,997,911		44,517,380		35,519,469	
1774.7420	Bulk Cable for MFFF Construction	Option 1	MFFF Construction - Installation/Materials	10,123,467		36,510,224		26,386,757	
1774.7421	Electrical Connectors for MFFF Construction	Option 1	MFFF Construction - Installation/Materials	-		-		-	
1774.7422	Electric Glove Box Penetrations for MFFF Construction	Option 1	MFFF Construction - Installation/Materials	-		-		-	
1774.7424	Distributables - Bulk Commodity - HVAC	Option 1	MFFF Construction - Installation/Materials	16,844,578		17,545,355		700,777	
1774.7427	Rebar MFFF Construction	Option 1	MFFF Construction - Installation/Materials	-		59,420		59,420	
1774.7428	Civil/Structural Material	Option 1	MFFF Construction - Installation/Materials	12,784,971		44,341,502		31,556,531	
1774.7429	Distributables - Bulk Commodity - Stainless Steel Ball Valves	Option 1	MFFF Construction - Installation/Materials	17,659,657		17,088,381		(571,276)	
1774.7430	Distributable - Bulk Commodity Account - Chillers	Option 1	MFFF Construction - Installation/Materials	2,428,798		2,321,091		(107,707)	
1774.7431	Bulk Commodity - Fans	Option 1	MFFF Construction - Installation/Materials	-		-		-	
1774.7432	Electrical Material and Other Miscellaneous Labor Acct	Option 1	MFFF Construction - Installation/Materials	15,115,366		81,807,066		66,691,700	
1774.7433	Instrumentation & Controls Material	Option 1	MFFF Construction - Installation/Materials	97,473,686		73,807,772		(23,665,914)	
1774.7434	Chemical Equipment	Option 1	MFFF Construction - Installation/Materials	-		9,905,742		9,905,742	
1774.7435	Distributables - HVAC Equipment	Option 1	MFFF Construction - Installation/Materials	7,046,692		92,131,147		85,084,455	
1774.7436	Suspense Account - Process Equipment	Option 1	MFFF Construction - Installation/Materials	-		36,697		36,697	
1774.7438	Mechanical Equipment	Option 1	MFFF Construction - Installation/Materials	54,802,155		143,942,463		89,140,308	
1774.7439	Consumable & Expendable Materials Specific to CP-27 – BAP Chemical P	Option 1	MFFF Construction - Installation/Materials	1,584,469		37,778,832		36,194,363	
1774.7440	Support Building for the Fabrication of Supports on Site Specific to	Option 1	MFFF Construction - Installation/Materials	-		39,366,963		39,366,963	
1774.7441	BRP Distributables	Option 1	MFFF Construction - Installation/Materials	-		481,143		481,143	
1774.7442	Craft Labor for Non-Discipline Specific Scope	Option 1	MFFF Construction - Installation/Materials	-		7,070,939		7,070,939	
1774.7445	Craft Orientation & Training	Option 1	MFFF Construction - Installation/Materials	-		3,113,237		3,113,237	
1774.7446	MOX Construction Back Charges	Option 1	MFFF Construction - Installation/Materials	-		-		-	
1774.7453	Craft Orientation & Training	Option 1	MFFF Construction - Installation/Materials	-		125,868		125,868	
1774.7454	Bulk Procurement - Material	Option 1	MFFF Construction - Installation/Materials	-		253,976		253,976	
1774.7455	Distributable - Subcontract	Option 1	MFFF Construction - Installation/Materials	-		750,385		750,385	
1775.7501	Batch Plant Capital Cost	Option 1	MFFF Construction - Installation/Materials	-		-		-	
1775.7502	Batch Plant Operations	Option 1	MFFF Construction - Installation/Materials	-		0		0	
1775.7503	Batch Plant Concrete Materials	Option 1	MFFF Construction - Installation/Materials	-		(0)		(0)	
MFFF Construction - Installation/Materials Subtotal				\$ 1,062,600,195		\$ 2,204,150,497		\$ 1,141,550,303	
1500.8501	Management / Admin	Option 1	Construction Management	\$ 23,522,195		\$ 63,202,558		\$ 39,680,363	
1500.8502	Project Controls	Option 1	Construction Management	10,943,800		32,745,008		21,801,208	

CB&I AREVA MOX Services, LLC.
MFFF Project Cost Growth by Cost Account and Claim Category

Schedule 6.11

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = B - A
				2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1500.8503	Quality Assurance	Option 1	Construction Management	749,625	484,283	(265,342)
1500.8504	ES&H	Option 1	Construction Management	2,719,758	694,576	(2,025,182)
1500.8506	Business	Option 1	Construction Management	1,451,888	4,061,850	2,609,963
1501.8511	Business Travel	Option 1	Construction Management	711,965	494,312	(217,653)
1501.8512	Temporary Assignments	Option 1	Construction Management	20,153	1,802,546	1,782,393
1501.8519	Project Controls	Option 1	Construction Management	-	-	-
1502.8521	Supervision / Admin	Option 1	Construction Management	-	-	-
1502.8522	Project Controls	Option 1	Construction Management	-	-	-
1502.8523	Quality Assurance	Option 1	Construction Management	-	-	-
1502.8524	ES&H	Option 1	Construction Management	-	-	-
1503.8531	Supervision / Admin	Option 1	Construction Management	-	-	-
1503.8532	Project Controls	Option 1	Construction Management	-	-	-
1503.8534	ES&H	Option 1	Construction Management	-	-	-
1504.8512	Temporary Assignments	Option 1	Construction Management	-	1,858	1,858
1504.8541	Supervision / Admin	Option 1	Construction Management	21,437,033	107,636,857	86,199,824
1504.8542	Work Control Group	Option 1	Construction Management	-	-	-
1505.8551	Supervision / Admin	Option 1	Construction Management	(41,922)	3,461,412	3,503,334
1505.8552	Project Controls	Option 1	Construction Management	-	-	-
1505.8554	ES&H	Option 1	Construction Management	-	-	-
Construction Management Subtotal				\$ 61,514,495	\$ 214,585,261	\$ 153,070,766
1901.6017	Human Performance Improvement Program	Option 1	QA	\$ -	\$ 162,906	\$ 162,906
1901.6018	QA/QC - JLE/LTTA	Option 1	QA	-	-	-
1901.6020	QA Program Management & Administration	Option 1	QA	3,211,818	12,989,851	9,778,033
1901.6021	Quality Engineering	Option 1	QA	4,758,444	24,010,181	19,251,737
1901.6022	Audit & Surveillance	Option 1	QA	1,318,214	13,036,397	11,718,183
1901.6023	Quality Control Projects	Option 1	QA	4,652,064	78,946,499	74,294,435
1901.6024	QA & QC Assembly GS	Option 1	QA	1,716,727	4,392,446	2,675,719
1901.6025	MOX Potential Back Charges	Option 1	QA	-	399	399
1901.6026	QA/QC Subcontractors	Option 1	QA	300,000	256,791	(43,209)
1901.6027	Testing & Inspection QA/QC	Option 1	QA	3,776,738	22,121,449	18,344,711
1901.6028	Commercial Grade Dedication	Option 1	QA	-	54,273	54,273
1901.6029	Regulatory Compliance	Option 1	QA	720,511	5,147,845	4,427,334
1901.9003	Quality Engineering	Option 1	QA	1,353,049	-	(1,353,049)
1901.9503	Quality Engineering	Option 1	QA	-	-	-
1902.6017	Human Performance Improvement Program	Option 1	QA	-	10,204	10,204
1902.6020	QA Program Management & Administration	Option 1	QA	-	1,809,790	1,809,790
1902.6021	Quality Engineering	Option 1	QA	-	1,277,372	1,277,372
1902.6022	Audit & Surveillance	Option 1	QA	-	1,270,862	1,270,862
1902.6023	Quality Control Projects	Option 1	QA	-	2,036,800	2,036,800
1902.6026	QA/QC Subcontractors	Option 1	QA	-	22,215	22,215
1902.6027	Testing & Inspection QA/QC	Option 1	QA	-	349,467	349,467
1902.6029	Regulatory Compliance	Option 1	QA	-	983,821	983,821
1902.9503	Quality Engineering	Option 1	QA	1,215,489	-	(1,215,489)
Quality Assurance Subtotal				\$ 23,023,054	\$ 168,879,568	\$ 145,856,514
0601.6001	Communications	Option 1	Not Claimed- All Other	\$ -	\$ -	\$ -
0601.6009	Relocations	Option 1	Not Claimed- All Other	-	-	-
0602.6010	Project Controls	Option 1	Not Claimed- All Other	-	-	-
0604.6032	Training	Option 1	Not Claimed- All Other	-	-	-
0604.6036	Accounting, Treasury & Invoice Operations	Option 1	Not Claimed- All Other	-	-	-

CB&I AREVA MOX Services, LLC.
MFFF Project Cost Growth by Cost Account and Claim Category

Schedule 6.11

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = B - A
				2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
0604.6038	Facility Management	Option 1	Not Claimed- All Other	-	-	-
0604.6042	PERCS	Option 1	Not Claimed- All Other	-	-	-
0604.6047	Legal Expenses	Option 1	Not Claimed- All Other	-	-	-
0606.6057	Engineered Equipment Group	Option 1	Not Claimed- All Other	-	-	-
0607.6060	IT Support	Option 1	Not Claimed- All Other	-	-	-
0607.6061	IT Other Direct Costs (ODCs)	Option 1	Not Claimed- All Other	-	-	-
0611.6001	Communications	Option 1	Not Claimed- All Other	-	-	-
0611.6090	Project Systems Assessment - NNSA (OPC)	Option 1	Not Claimed- All Other	-	-	-
0614.6033	Materials Management	Option 1	Not Claimed- All Other	-	-	-
1000.8005	Document Management	Option 1	Not Claimed- All Other	-	450,677	450,677
1000.8006	Engineering Training	Option 1	Not Claimed- All Other	(1,662,648)	1,124,889	2,787,537
1001.8011	Business Travel	Option 1	Not Claimed- All Other	984,928	334,582	(650,346)
1001.8012	Temporary Assignments	Option 1	Not Claimed- All Other	-	-	-
1001.8019	Other ODCs	Option 1	Not Claimed- All Other	2,294,689	792,740	(1,501,949)
1002.8022	Chemical	Option 1	Not Claimed- All Other	697,527	620,664	(76,863)
1002.8023	Mechanical	Option 1	Not Claimed- All Other	899,488	93,201	(806,287)
1002.8024	Laboratory	Option 1	Not Claimed- All Other	217,824	63,836	(153,988)
1002.8026	Safety	Option 1	Not Claimed- All Other	299,570	79,743	(219,827)
1002.8027	Reference Plant Support	Option 1	Not Claimed- All Other	229,339	28,220	(201,119)
1003.8031	Supervision / Admin	Option 1	Not Claimed- All Other	(852,472)	1,000,816	1,853,288
1003.8038	Engineering Mechanics - Site Construction Support	Option 1	Not Claimed- All Other	-	-	-
1004.8046	Chemical-Procurement/Fabrication Support	Option 1	Not Claimed- All Other	-	-	-
1004.8048	Plant Configuration - Construction, Procurement & Fabrication Support	Option 1	Not Claimed- All Other	2,338,083	-	(2,338,083)
1004.8049	Equipment Qualification	Option 1	Not Claimed- All Other	(127,547)	426,083	553,630
1005.8051	Supervision / Admin	Option 1	Not Claimed- All Other	435,306	141,465	(293,840)
1005.8059	Plant Configuration	Option 1	Not Claimed- All Other	-	-	-
1100.8101	Management / Administration	Option 1	Not Claimed- All Other	56,895	210,215	153,320
1100.8102	NSA Project Controls	Option 1	Not Claimed- All Other	80,184	94,764	14,580
1101.8111	Business Travel	Option 1	Not Claimed- All Other	361,404	87,121	(274,283)
1101.8119	Other ODCs (Legal & S/C Costs)	Option 1	Not Claimed- All Other	2,060,536	896,882	(1,163,654)
1102.8122	Compliance Program	Option 1	Not Claimed- All Other	459,181	912,882	453,701
1103.8132	Chemical Safety Support	Option 1	Not Claimed- All Other	3,216,532	2,050,513	(1,166,019)
1103.8133	Laboratory Support	Option 1	Not Claimed- All Other	1,712,258	1,228,793	(483,465)
1104.8151	Criticality Safety Procurement & Cons	Option 1	Not Claimed- All Other	-	-	-
1105.8151	Criticality Safety Procurement & Const Support	Option 1	Not Claimed- All Other	2,250,017	3,169,473	919,456
1105.8152	Criticality Safety Startup Support	Option 1	Not Claimed- All Other	2,570,594	1,434,865	(1,135,729)
1105.8153	Criticality Safety Licensing Support	Option 1	Not Claimed- All Other	2,971,399	2,046,062	(925,337)
1105.8154	Nuclear Radiation Protections	Option 1	Not Claimed- All Other	3,071,845	2,737,319	(334,526)
1105.8155	Nuclear Radiation & Criticality Monitoring	Option 1	Not Claimed- All Other	886,654	594,766	(291,888)
1105.8156	Emerg. Planning & Deactivation Design Spt.	Option 1	Not Claimed- All Other	233,008	143,133	(89,875)
1106.8116	Integrated Safety Analysis	Option 1	Not Claimed- All Other	-	-	-
1106.8161	Defense of the Safety Basis	Option 1	Not Claimed- All Other	3,312,438	2,663,143	(649,295)
1106.8162	ISA Review of Design/Construction Modification	Option 1	Not Claimed- All Other	2,793,633	2,831,117	37,484
1106.8164	Update the Safety Basis	Option 1	Not Claimed- All Other	4,732,258	3,584,413	(1,147,845)
1106.8165	Support Update of the ISA Summary	Option 1	Not Claimed- All Other	1,779,036	1,211,164	(567,872)
1109.8192	Physical Security Program	Option 1	Not Claimed- All Other	3,793,703	2,940,859	(852,844)
1109.8193	Material Control & Accountability Program	Option 1	Not Claimed- All Other	2,710,939	1,597,569	(1,113,370)
1109.8195	DOE/WSRC Costs	Option 1	Not Claimed- All Other	-	-	-
1757.5700	AP Chemical Units	Option 1	Not Claimed- All Other	-	-	-
1757.5720	AP Mechanical Units	Option 1	Not Claimed- All Other	-	-	-
2000.9001	Management / Administration	Option 1	Not Claimed- All Other	3,100,265	-	(3,100,265)

CB&I AREVA MOX Services, LLC.
MFFF Project Cost Growth by Cost Account and Claim Category

Schedule 6.11

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = B - A
				2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
2000.9002	Project Controls	Option 1	Not Claimed- All Other	1,456,987	-	(1,456,987)
2000.9003	Quality Assurance	Option 1	Not Claimed- All Other	-	-	-
2000.9004	Environment, Safety & Health	Option 1	Not Claimed- All Other	-	-	-
2001.9011	Business Travel	Option 1	Not Claimed- All Other	2,753,497	1,049,346	(1,704,151)
2001.9012	Temporary Assignments	Option 1	Not Claimed- All Other	2,111,832	71,116	(2,040,716)
2001.9014	Test Equipment & Consumables	Option 1	Not Claimed- All Other	13,149,552	1,927,294	(11,222,258)
2001.9017	Spare Parts	Option 1	Not Claimed- All Other	3,961,181	385,458	(3,575,723)
2002.9021	Generic Test Documents	Option 1	Not Claimed- All Other	1,772,689	1,500,169	(272,520)
2002.9022	Validation Plans	Option 1	Not Claimed- All Other	8,423,068	1,059,587	(7,363,481)
2002.9023	General Test Programs	Option 1	Not Claimed- All Other	1,764,832	2,380,380	615,548
2002.9024	Technical Support	Option 1	Not Claimed- All Other	3,217,683	2,488,803	(728,880)
2002.9026	Cold Startup Training	Option 1	Not Claimed- All Other	1,218,246	155,818	(1,062,428)
2002.9527	Generic Test Documents	Option 1	Not Claimed- All Other	-	-	-
2003.9011	Generic Test Documents	Option 1	Not Claimed- All Other	-	-	-
2003.9031	In-Advance Tests in U.S.	Option 1	Not Claimed- All Other	8,731,119	8,577,404	(153,715)
2003.9032	In-Advance Tests in Europe	Option 1	Not Claimed- All Other	3,929,344	2,238,999	(1,690,345)
2004.9041	Aqueous Polishing	Option 1	Not Claimed- All Other	26,892,156	17,121,299	(9,770,858)
2004.9042	MOX Process	Option 1	Not Claimed- All Other	23,517,959	21,675,945	(1,842,014)
2004.9043	Balance of Plant	Option 1	Not Claimed- All Other	19,879,489	15,238,873	(4,640,616)
2004.9044	Reaction to General Incident (RGI)	Option 1	Not Claimed- All Other	3,827,814	2,529,087	(1,298,727)
2004.9047	Turnover & Logistics	Option 1	Not Claimed- All Other	13,498,496	-	(13,498,496)
2004.9048	Laboratory - IPT	Option 1	Not Claimed- All Other	-	8,094,707	8,094,707
2004.9049	Process Control - IPT	Option 1	Not Claimed- All Other	-	7,939,498	7,939,498
2005.9051	SU In-Advance Tests Rework and Modifications in US	Option 1	Not Claimed- All Other	-	176,629	176,629
2007.9071	MOX IPT Rework	Option 1	Not Claimed- All Other	-	34,495,693	34,495,693
2010.9101	Management / Administration - IPT	Option 1	Not Claimed- All Other	-	-	-
2010.9102	Project Controls - IPT	Option 1	Not Claimed- All Other	-	-	-
2011.9111	Business Travel - IPT	Option 1	Not Claimed- All Other	-	310,955	310,955
2011.9112	Generic Test Documents	Option 1	Not Claimed- All Other	-	-	-
2011.9114	Test Equipment & Consumables - IPT	Option 1	Not Claimed- All Other	-	11,050,555	11,050,555
2011.9117	Spare Parts - IPT	Option 1	Not Claimed- All Other	-	-	-
2012.9124	Technical Support - IPT	Option 1	Not Claimed- All Other	-	168,776	168,776
2012.9126	Cold Startup Training - IPT	Option 1	Not Claimed- All Other	-	-	-
2201.8138	Relocation	Option 1	Not Claimed- All Other	-	-	-
2201.8139	Field Office Supplies	Option 1	Not Claimed- All Other	-	-	-
2201.8141	ES&H Program	Option 1	Not Claimed- All Other	-	-	-
2201.8143	Environmental Protection Program	Option 1	Not Claimed- All Other	-	-	-
2201.8144	Industrial Safety Program	Option 1	Not Claimed- All Other	27,680	-	(27,680)
2201.8145	Waste Management Program	Option 1	Not Claimed- All Other	8,156	-	(8,156)
2201.8146	Fitness for Duty Program	Option 1	Not Claimed- All Other	(41,750)	-	41,750
2201.8147	Emergency Preparedness Program	Option 1	Not Claimed- All Other	(1,322,813)	-	1,322,813
2201.8148	Employee Safety Incentive Program	Option 1	Not Claimed- All Other	-	-	-
2201.8149	ES & H Safety Engineer	Option 1	Not Claimed- All Other	-	-	-
2201.8820	Field Office Supplies	Option 1	Not Claimed- All Other	-	-	-
2201.9004	Field Office Supplies	Option 1	Not Claimed- All Other	-	-	-
2201.9504	Field Office Supplies	Option 1	Not Claimed- All Other	-	-	-
2201.9506	Field Office Supplies	Option 1	Not Claimed- All Other	-	-	-
2202.8139	Field Office Supplies	Option 1	Not Claimed- All Other	135,535	-	(135,535)
2202.8145	Waste Management Program	Option 1	Not Claimed- All Other	-	-	-
2202.9004	Field Office Supplies	Option 1	Not Claimed- All Other	2,434,223	-	(2,434,223)
2202.9506	Field Office Supplies	Option 1	Not Claimed- All Other	481,757	-	(481,757)

CB&I AREVA MOX Services, LLC.
MFFF Project Cost Growth by Cost Account and Claim Category

Schedule 6.11

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = B - A
				2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
9008.0901	DOE Annual Costs for the SRS M&O Support to MOX fo all Infrastructur	Option 1	Not Claimed- All Other	28,449,268	65,437,317	36,988,049
9009.0901	DOE/WSRC Support	Option 1	Not Claimed- All Other	(0)	-	0
9009.0902	DOE Annual Costs for the SRS M&O Support to MOX for Infrastructure S	Option 1	Not Claimed- All Other	97,675,478	56,179,840	(41,495,638)
9009.0903	DOE Tech Spt. (Non-MOX Services Cost)	Option 1	Not Claimed- All Other	138,317,424	115,587,284	(22,730,140)
All Other Subtotal				\$ 454,177,767	\$ 413,432,801	\$ (40,744,966)
Option 1 Subtotal				\$ 2,778,822,480	\$ 5,563,751,381	\$ 2,784,928,901
0110.5101	NRC Costs - MFFF	Base	Not Claimed- Base Contract	\$ 12,492,680	\$ 12,646,529	\$ 153,849
0110.5301	Environmental Report	Base	Not Claimed- Base Contract	1,808,835	1,822,489	13,655
0110.5302	Electrolyzer Testing	Base	Not Claimed- Base Contract	268,674	268,684	10
0110.5303	ORNL Gallium Testing	Base	Not Claimed- Base Contract	100,000	100,000	-
0110.5304	ORNL Criticality Review	Base	Not Claimed- Base Contract	150,000	150,000	-
0110.5305	Clemson University Research	Base	Not Claimed- Base Contract	1,300,232	1,421,977	121,745
0110.5306	Development & Test Programs	Base	Not Claimed- Base Contract	2,061,991	2,111,621	49,630
0110.5307	Site Develop./Infrast. Improvement OPC Work	Base	Not Claimed- Base Contract	496,072	496,340	268
0110.5308	SCE Scanner Testing	Base	Not Claimed- Base Contract	506,071	511,780	5,709
0110.5401	MFFF Operations Planning	Base	Not Claimed- Base Contract	3,546	(84,994)	(88,540)
0110.5402	Safety & Systems Integration	Base	Not Claimed- Base Contract	213,271	210,415	(2,856)
0110.5411	Licensing	Base	Not Claimed- Base Contract	5,058,850	5,107,144	48,293
0110.5421	Engineering Support to Licensing - PDG	Base	Not Claimed- Base Contract	88,152	98,149	9,996
0110.5422	Engineering Support to Licensing - FDG	Base	Not Claimed- Base Contract	103,586	121,379	17,793
0110.5423	Engine+B1001ering Support to Licensing - C/S	Base	Not Claimed- Base Contract	112,400	116,292	3,892
0110.5424	Eng. Support to Lic. - Mech.Prog.	Base	Not Claimed- Base Contract	193,906	283,621	89,716
0110.5425	Eng. Support to Lic.- Elect/ I&C/S&S/MC&A	Base	Not Claimed- Base Contract	25,950	25,078	(872)
0110.5427	Engr Support to Lic - Nuclear Safety	Base	Not Claimed- Base Contract	4,805,180	4,823,621	18,440
0110.5428	MFFF Environmental / Permitting	Base	Not Claimed- Base Contract	324,405	320,086	(4,319)
0110.5431	Facility Security Vulnerability Assessment	Base	Not Claimed- Base Contract	181,482	181,482	-
0110.5432	Facility Licensing Plans	Base	Not Claimed- Base Contract	2,301,401	2,305,639	4,238
0110.5450	Miscellaneous Studies	Base	Not Claimed- Base Contract	808,170	970,612	162,443
0110.5451	Coord. & Oversight of CETL Research Projects	Base	Not Claimed- Base Contract	210,465	285,972	75,507
0110.5452	CAB Change Phase II Scoping & Devel	Base	Not Claimed- Base Contract	178,090	180,858	2,768
0110.5453	Monitoring & Inspection Impacts Study	Base	Not Claimed- Base Contract	30,700	30,935	235
0110.5454	CAB Phase II	Base	Not Claimed- Base Contract	3,950	3,875	(75)
0110.5455	Maximize the use of MFFF Study	Base	Not Claimed- Base Contract	-	104,822	104,822
0110.5499	Control Area Boundary Change Scoping	Base	Not Claimed- Base Contract	732,197	731,640	(557)
0110.5601	DNFSB	Base	Not Claimed- Base Contract	-	60	60
0111.1101	General	Base	Not Claimed- Base Contract	5,026,335	4,800,117	(226,218)
0111.1102	Mobilization, De-Mob, & Close-out	Base	Not Claimed- Base Contract	888,051	899,521	11,470
0111.1103	Management	Base	Not Claimed- Base Contract	5,971,015	5,945,756	(25,259)
0111.1104	Administrative	Base	Not Claimed- Base Contract	2,660,030	2,667,640	7,610
0111.1105	Support Services	Base	Not Claimed- Base Contract	5,357,579	5,107,135	(250,444)
0111.1106	Miscellaneous	Base	Not Claimed- Base Contract	756,216	737,690	(18,527)
0111.1107	General Expenses	Base	Not Claimed- Base Contract	14,729,895	14,553,159	(176,736)
0111.1108	Procedure Development	Base	Not Claimed- Base Contract	29	29	-
0112.8301	MDG Base Contract (Pre FY 2003)	Base	Not Claimed- Base Contract	4,741,885	5,049,539	307,654
0113.1301	General	Base	Not Claimed- Base Contract	16,203,184	16,151,645	(51,539)
0113.1302	Receiving	Base	Not Claimed- Base Contract	812,940	814,098	1,158
0113.1303	Powder	Base	Not Claimed- Base Contract	2,908,689	2,927,651	18,962
0113.1304	Pellets	Base	Not Claimed- Base Contract	2,065,684	2,065,298	614
0113.1305	Cladding	Base	Not Claimed- Base Contract	1,414,974	1,415,796	822

CB&I AREVA MOX Services, LLC.
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Schedule 6.11

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = B - A
				2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
0113.1306	Assembling	Base	Not Claimed- Base Contract	968,526	967,433	(1,093)
0113.1307	Laboratory	Base	Not Claimed- Base Contract	557,218	557,757	538
0113.1308	Samples Pneumatic Transfer	Base	Not Claimed- Base Contract	191,095	191,097	3
0113.1309	Waste Management	Base	Not Claimed- Base Contract	436,191	436,733	541
0113.1310	Material Control & Accountability	Base	Not Claimed- Base Contract	325,233	325,534	301
0113.1311	Process Control	Base	Not Claimed- Base Contract	422,428	422,672	244
0113.1312	Integrated Safety Analysis	Base	Not Claimed- Base Contract	5,059,365	5,080,631	21,266
0113.1313	Facility Input	Base	Not Claimed- Base Contract	819,271	819,425	153
0113.1399	PDG MOX Process Unplanned Work	Base	Not Claimed- Base Contract	386,378	363,641	(22,736)
0114.1401	General	Base	Not Claimed- Base Contract	4,992,486	4,943,475	(49,011)
0114.1402	Dissolution	Base	Not Claimed- Base Contract	4,389,754	4,396,665	6,910
0114.1403	Purification	Base	Not Claimed- Base Contract	3,985,738	3,989,262	3,524
0114.1404	Conversion	Base	Not Claimed- Base Contract	1,661,571	1,662,388	817
0114.1405	Facility Input	Base	Not Claimed- Base Contract	3,071,732	3,073,636	1,904
0114.1406	Safety	Base	Not Claimed- Base Contract	7,625,187	7,785,239	160,052
0115.1501	General	Base	Not Claimed- Base Contract	13,537,594	13,628,548	90,954
0115.1502	Buildings, Structures & Yard	Base	Not Claimed- Base Contract	37,545,386	37,399,208	(146,178)
0115.1503	Deliverables	Base	Not Claimed- Base Contract	20,290	20,283	(7)
0115.1504	Mechanical Programs	Base	Not Claimed- Base Contract	31,095,227	67,260,261	36,165,035
0115.1505	Electrical Programs	Base	Not Claimed- Base Contract	780,168	917,015	136,846
0115.1506	Nuclear Safety Programs	Base	Not Claimed- Base Contract	14,145,270	14,413,675	268,405
0115.1507	Mechanical Systems & Components	Base	Not Claimed- Base Contract	27,601,213	28,782,999	1,181,786
0115.1508	Electrical Systems & Components	Base	Not Claimed- Base Contract	33,524,806	40,963,289	7,438,483
0115.1509	Nuclear Safety Systems & Components	Base	Not Claimed- Base Contract	2,715,956	2,710,756	(5,200)
0115.1510	Process Mechanical	Base	Not Claimed- Base Contract	15,042,764	15,181,618	138,854
0115.1511	Mechanical Gloveboxes	Base	Not Claimed- Base Contract	5,819,916	5,593,595	(226,321)
0115.1512	Site Development / Infrastructure Improvement	Base	Not Claimed- Base Contract	2,101,908	1,966,135	(135,773)
0115.1513	Plant Design System	Base	Not Claimed- Base Contract	37,535,687	52,553,299	15,017,613
0115.8154	Nuclear Radiation Protections	Base	Not Claimed- Base Contract	-	-	-
0116.1601	DNFSB & Commonality Questions & Issues	Base	Not Claimed- Base Contract	0	535	535
0116.8401	SDG Base Contract Pre-FY 2003	Base	Not Claimed- Base Contract	2,516,494	2,463,869	(52,625)
0117.1701	Licensing	Base	Not Claimed- Base Contract	14,857,708	14,916,060	58,352
0117.1702	Environmental Report	Base	Not Claimed- Base Contract	6,678	6,128	(550)
0117.1703	Environment	Base	Not Claimed- Base Contract	453,526	457,912	4,386
0117.1704	Safety & Health	Base	Not Claimed- Base Contract	698,078	713,480	15,402
0117.1705	Emergency Planning	Base	Not Claimed- Base Contract	152,275	149,349	(2,927)
0117.1706	ISA Support (Contractor's ODCs)	Base	Not Claimed- Base Contract	19,944,162	19,852,077	(92,085)
0117.1707	Technology Assessment (TA) Support	Base	Not Claimed- Base Contract	1,502,765	1,571,146	68,380
0117.1710	UCNI Training	Base	Not Claimed- Base Contract	92,890	93,039	148
0118.1801	Office rent, suppl/serv, equi.& furnit L&P	Base	Not Claimed- Base Contract	2,997,271	2,994,997	(2,274)
0118.1802	Furniture	Base	Not Claimed- Base Contract	2,378,914	2,378,913	(1)
0118.1803	Cabling & Telephone	Base	Not Claimed- Base Contract	94,023	94,023	(0)
0118.1804	Upfit	Base	Not Claimed- Base Contract	387,935	387,936	1
0118.1805	Relocation Services	Base	Not Claimed- Base Contract	10,495	10,495	-
0118.1806	Remote Location Office Space	Base	Not Claimed- Base Contract	412,913	415,133	2,220
0119.1901	Computer Equipment & Software L&P	Base	Not Claimed- Base Contract	5,643,574	5,719,902	76,329
0119.1902	Software	Base	Not Claimed- Base Contract	1,136,702	1,136,702	0
0119.1903	Service Contracts	Base	Not Claimed- Base Contract	283,607	283,607	0
0119.1904	Initial Setup	Base	Not Claimed- Base Contract	12,910	13,101	191
0120.8110	Project Management Pre-Construction Planning	Base	Not Claimed- Base Contract	4,945,005	4,974,617	29,611
0120.8120	Project Controls Pre-Construction	Base	Not Claimed- Base Contract	2,498,517	2,525,925	27,408

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Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = B - A
				2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
0120.8130	Project QA Pre-Construction	Base	Not Claimed- Base Contract	-	-	-
0120.8140	Project ES&H Pre-Construction	Base	Not Claimed- Base Contract	765,345	758,325	(7,020)
0120.8160	Project Services & Admin Pre-Construction	Base	Not Claimed- Base Contract	62,741	64,361	1,620
0120.8170	Procure./Subcontract Admin Pre-Construction	Base	Not Claimed- Base Contract	270,533	284,712	14,179
0120.8200	PreOpt1BConstrPrjTitleIII EngineeringMgmt-LL EnginProcurement	Base	Not Claimed- Base Contract	3,175	3,153	(22)
0120.8210	Engineering Civil / Structural Pre-Construction	Base	Not Claimed- Base Contract	179,711	177,361	(2,349)
0120.8220	Engineering Mechanical Pre-Construction	Base	Not Claimed- Base Contract	53,541	39,784	(13,757)
0120.8230	Engineering Electrical / I&C Pre-Construction	Base	Not Claimed- Base Contract	61,123	60,918	(204)
0121.1654	MFFF Operations Planning	Base	Not Claimed- Base Contract	11,426,550	10,880,272	(546,278)
0122.1611	PuO2 Polishing Planning	Base	Not Claimed- Base Contract	670,387	159,814	(510,573)
0122.1612	DUO2 Supply Planning	Base	Not Claimed- Base Contract	513,193	488,321	(24,872)
0123.1420	Up Front Design	Base	Not Claimed- Base Contract	-	2,823,111	2,823,111
0124.1415	DMO - Preserve The Option	Base	Not Claimed- Base Contract	-	3,134,723	3,134,723
0661.6101	Project Office Operations	Base	Not Claimed- Base Contract	6,289,830	6,418,213	128,382
0661.6102	Personnel Relocations	Base	Not Claimed- Base Contract	35,173	57,213	22,040
0661.6103	Project Support Services	Base	Not Claimed- Base Contract	-	97	97
0661.6105	Mixed Oxide (MOX) Proj. Ext. Communications	Base	Not Claimed- Base Contract	446,447	440,973	(5,474)
0661.6106	IT Labor	Base	Not Claimed- Base Contract	3,770,735	3,753,790	(16,945)
0661.6110	Independent Review Team (IRT) Review - NA54	Base	Not Claimed- Base Contract	1,475,958	1,486,360	10,402
0661.6150	Relocations	Base	Not Claimed- Base Contract	3,055,742	3,056,897	1,155
0662.6201	Project Controls & Integration	Base	Not Claimed- Base Contract	14,059,560	14,129,225	69,665
0662.6202	Risk Management	Base	Not Claimed- Base Contract	939,493	923,190	(16,303)
0663.6301	QA Program Management & Administration	Base	Not Claimed- Base Contract	604,125	597,540	(6,585)
0663.6302	Quality Engineering	Base	Not Claimed- Base Contract	1,209,198	1,224,692	15,494
0663.6303	Quality Verification	Base	Not Claimed- Base Contract	1,294,876	1,286,519	(8,358)
0664.6401	ES&H Integration	Base	Not Claimed- Base Contract	1,345,129	1,340,978	(4,151)
0664.6402	Regulatory Affairs Management & Admin.	Base	Not Claimed- Base Contract	452,998	431,238	(21,760)
0664.6403	Safety and Health	Base	Not Claimed- Base Contract	75	75	-
0664.6404	Incident Investigation / Corrective Action Program	Base	Not Claimed- Base Contract	-	(53)	(53)
0665.6501	Trade-off Studies	Base	Not Claimed- Base Contract	1,291	2,286	995
0665.6502	Plutonium (Pu) Disposition Study	Base	Not Claimed- Base Contract	-	457	457
0665.6505	NA	Base	Not Claimed- Base Contract	-	-	-
0666.6600	Project Services & Administration	Base	Not Claimed- Base Contract	1,670	1,670	-
0666.6601	Contracts	Base	Not Claimed- Base Contract	18,707,760	19,104,032	396,272
0666.6602	Administration	Base	Not Claimed- Base Contract	2,923,771	2,607,252	(316,520)
0666.6603	Electronic Doc / Records Management	Base	Not Claimed- Base Contract	1,788,884	1,809,605	20,721
0666.6604	Training & Internal Communication	Base	Not Claimed- Base Contract	332,019	362,896	30,877
0666.6605	Project Accounting / Finance	Base	Not Claimed- Base Contract	2,928,733	2,912,125	(16,608)
0666.6606	Bank Analysis Fees	Base	Not Claimed- Base Contract	3,097	16,703	13,606
0666.6608	Procurement	Base	Not Claimed- Base Contract	3,014,377	3,027,990	13,614
0666.6609	Asset Management	Base	Not Claimed- Base Contract	294,085	287,005	(7,080)
0667.6701	Licensing	Base	Not Claimed- Base Contract	4,830	-	-
0668.6801	Charlotte Office Space	Base	Not Claimed- Base Contract	52,913	52,238	(675)
0668.6802	Furniture	Base	Not Claimed- Base Contract	33,304	33,304	0
0668.6803	Cabling & Telephone	Base	Not Claimed- Base Contract	0	(17,325)	(17,325)
0668.6804	UpFit	Base	Not Claimed- Base Contract	1,966	3,962	1,996
0668.6805	Relocation Services	Base	Not Claimed- Base Contract	1,917	2,456	540
0668.6806	Remote Location Office Space	Base	Not Claimed- Base Contract	46,201	46,201	(0)
0668.6810	Office Rent, Supplies, & Services	Base	Not Claimed- Base Contract	5,792,974	5,833,773	40,799
0668.6811	Office Equipment & Furniture Lease & Purchase	Base	Not Claimed- Base Contract	2,600,476	2,607,350	6,873
0668.6812	Computer Equipment and Software Leases & Purchases	Base	Not Claimed- Base Contract	8,071,682	8,043,555	(28,127)

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				2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
0668.8810	Offsite Office Rent, Supplies & Services	Base	Not Claimed- Base Contract	3,293,692	3,331,590	37,897
0668.8811	Offsite Off.Equip.& Furnit. L. & P., and Workspace Upfit	Base	Not Claimed- Base Contract	326,998	328,503	1,504
0668.8812	Offsite Computer Equip.& Software L.& P.	Base	Not Claimed- Base Contract	728,823	749,822	20,999
0669.6901	Computer Hardware	Base	Not Claimed- Base Contract	74,662	74,923	262
0669.6902	Computer Software	Base	Not Claimed- Base Contract	21,584	21,717	133
0669.6903	Computer Services Contracts	Base	Not Claimed- Base Contract	17,602	18,228	627
0669.6904	Initial Setup	Base	Not Claimed- Base Contract	930	(9,464)	(10,394)
0670.8299	Process Unit Assembly Planning	Base	Not Claimed- Base Contract	2,246,073	2,234,104	(11,969)
1204.8240	PEG BOA's, Sole Source & Adv.Procure. Items	Base	Not Claimed- Base Contract	7,621,259	7,094,929	(526,330)
1204.8241	PEG Management	Base	Not Claimed- Base Contract	8,348,983	8,089,063	(259,920)
1204.8242	PEG Training & Technical Support	Base	Not Claimed- Base Contract	4,480,527	4,473,163	(7,364)
1204.8243	PEG Build to Print Manuf./Install. Required	Base	Not Claimed- Base Contract	413,137	420,711	7,574
1204.8244	PEG AP/MP Laboratory Design/Build	Base	Not Claimed- Base Contract	1,521,991	2,151,804	629,813
1204.8245	PEG Documents External Review Support	Base	Not Claimed- Base Contract	395,037	411,870	16,833
1204.8246	Process Support AP/MP Lab Design/Build	Base	Not Claimed- Base Contract	1,652,363	1,534,414	(117,949)
1204.8247	PreOpt1ACnstPrjctProcUnitPEGVendorDesign	Base	Not Claimed- Base Contract	21,166,096	36,139,755	14,973,659
1204.8248	PreOpt1BProcUnitsPEG Design/Bld UnitSpecs	Base	Not Claimed- Base Contract	7,837,333	10,069,627	2,232,294
1204.8249	PreOpt1ACnstPrjct Proc Units PEG ODCs	Base	Not Claimed- Base Contract	1,098,216	1,431,198	332,982
1204.8293	Mech/Struct Procurements Engineering	Base	Not Claimed- Base Contract	(21,951)	-	21,951
1205.8250	US Regulations/ Process Requirements	Base	Not Claimed- Base Contract	4,675,608	5,078,781	403,173
1205.8251	PreOpt1BConstPrjProc-USRG/PRG Req Mgmt	Base	Not Claimed- Base Contract	1,654,432	1,726,646	72,214
1205.8252	US Regulations Personnel	Base	Not Claimed- Base Contract	1,956,373	1,943,952	(12,421)
1205.8253	Process Requirements Personnel	Base	Not Claimed- Base Contract	4,240,835	4,723,359	482,524
1205.8254	Pre-Option 1A Construction Project Process-General Support	Base	Not Claimed- Base Contract	1,556,585	1,631,079	74,493
1205.8255	PreOpt1ACnstPrjProc-USRG/PRG Admin Spt	Base	Not Claimed- Base Contract	213	254	41
1205.8256	Facility Design Group Support to PEG	Base	Not Claimed- Base Contract	434,416	582,035	147,619
1205.8257	Systems Engineering Group Support to I55EG	Base	Not Claimed- Base Contract	247,426	251,565	4,140
1205.8259	PreOpt1ACnstPrjProc-USRG/PRG - ODCs	Base	Not Claimed- Base Contract	963,061	1,037,150	74,089
1209.8290	Pre-Option 1B MDG, SDG & PEG Management	Base	Not Claimed- Base Contract	4,856,102	4,788,660	(67,442)
1209.8291	DCS Equipment Group Management - ODCs	Base	Not Claimed- Base Contract	552,106	552,464	358
1211.8131	Project QA - Option 1	Base	Not Claimed- Base Contract	682,418	666,916	(15,501)
1211.8171	PreOp1BCnstPrjMgmtPurchs Procurement - Mgt & Admin	Base	Not Claimed- Base Contract	1,729,620	1,817,722	88,102
1212.8292	Commercial Grade Dedication (CGD)	Base	Not Claimed- Base Contract	1,354,743	12,377,050	11,022,307
1212.8293	Chemical/Mechanical Subcontract Technical Representatives (STRs) and	Base	Not Claimed- Base Contract	4,180,687	17,173,735	12,993,048
1212.8294	Electrical/I&C Procurements Engineering	Base	Not Claimed- Base Contract	4,309,747	9,268,521	4,958,774
1212.8295	PEG Support of Others (Facility Eq)	Base	Not Claimed- Base Contract	15,049	463	(14,586)
1212.8296	PassPort Implementation & Support Engineering	Base	Not Claimed- Base Contract	2,612,921	2,291,097	(321,824)
1212.8297	PEG - Vendor Support Activities for Self Procurements	Base	Not Claimed- Base Contract	345,639	13,490	(332,149)
1212.8298	PEG Management & Administration (Facility Eq)	Base	Not Claimed- Base Contract	1,421,186	1,271,685	(149,501)
1213.8292	PEG Technical Support & Training (Facility Eq)	Base	Not Claimed- Base Contract	-	591,906	591,906
1301.8302	DCS Integrated Mgt	Base	Not Claimed- Base Contract	5,815,155	6,536,527	721,373
1301.8303	MDG Support Services	Base	Not Claimed- Base Contract	2,268,635	2,554,857	286,222
1301.8304	MDG Travel & Relocation - DCS	Base	Not Claimed- Base Contract	3,186,264	2,923,393	(262,872)
1301.8305	Production Centers Mgt	Base	Not Claimed- Base Contract	1,839,335	1,834,853	(4,482)
1301.8306	MDG Travel & Relocation Production Centers	Base	Not Claimed- Base Contract	1,554,772	1,574,026	19,254
1301.8307	MDG ODCs Production Centers	Base	Not Claimed- Base Contract	3,245,262	2,907,943	(337,318)
1301.8308	MDG Procurement Engineering Support	Base	Not Claimed- Base Contract	836,816	806,667	(30,149)
1301.8390	Design Offices Mgt	Base	Not Claimed- Base Contract	12,182,827	13,209,064	1,026,237
1301.8391	Production Internal Support	Base	Not Claimed- Base Contract	9,622,880	11,044,415	1,421,535
1302.8302	GDE - Rod Decladding	Base	Not Claimed- Base Contract	-	-	-
1302.8309	Technical Management	Base	Not Claimed- Base Contract	14,129,663	14,604,868	475,205

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				2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1302.8310	Technical Requirement Representatives	Base	Not Claimed- Base Contract	3,732,781	3,394,330	(338,451)
1302.8391	GDE - Rod Decladding	Base	Not Claimed- Base Contract	-	-	-
1302.8392	Follow-up	Base	Not Claimed- Base Contract	9,395,507	11,387,710	1,992,202
1302.839A	TSR Support from PDG	Base	Not Claimed- Base Contract	669,122	495,197	(173,925)
1302.839B	LLP/LTP/NTP Detailed Piping Design	Base	Not Claimed- Base Contract	-	188,202	188,202
1303.8312	NDD - PuO2 Can Receiving & Emptying	Base	Not Claimed- Base Contract	887,937	1,180,158	292,221
1303.8313	NDP - Primary Dosing	Base	Not Claimed- Base Contract	2,623,186	3,075,251	452,065
1303.8314	NDS - Final Dosing	Base	Not Claimed- Base Contract	2,845,323	3,093,351	248,028
1303.8319	NTM - Jar Storage & Handling	Base	Not Claimed- Base Contract	3,351,931	4,266,963	915,032
1303.8320	NXR - Powder Auxiliary	Base	Not Claimed- Base Contract	1,458,995	2,032,952	573,957
1304.8311	DCE - PuO2 Buffer Storage	Base	Not Claimed- Base Contract	743,598	1,181,879	438,281
1304.8312	NDD Conformance	Base	Not Claimed- Base Contract	47,851	132,157	84,306
1304.8313	NDP Conformance	Base	Not Claimed- Base Contract	1,199	18,959	17,760
1304.8314	NDS Conformance	Base	Not Claimed- Base Contract	70,585	120,759	50,174
1304.8319	NTM Conformance	Base	Not Claimed- Base Contract	14,997	68,967	53,970
1304.831A	VDR Design	Base	Not Claimed- Base Contract	340,737	393,445	52,708
1304.831B	VDU Design	Base	Not Claimed- Base Contract	190,740	174,431	(16,309)
1304.831C	DCM Design	Base	Not Claimed- Base Contract	851,334	582,630	(268,704)
1304.831G	GMK Design	Base	Not Claimed- Base Contract	250,649	235,016	(15,633)
1304.831H	SCE Design	Base	Not Claimed- Base Contract	566,643	708,694	142,051
1304.831J	SMK Design	Base	Not Claimed- Base Contract	543,419	641,167	97,748
1304.831L	SXE Design	Base	Not Claimed- Base Contract	528,315	403,954	(124,361)
1304.831M	TAS Design	Base	Not Claimed- Base Contract	609,723	675,546	65,823
1304.831N	TCL/TCK/TGJ Design	Base	Not Claimed- Base Contract	727,871	644,809	(83,062)
1304.831P	TCP Design	Base	Not Claimed- Base Contract	336,594	371,805	35,211
1304.831Q	TGM Design	Base	Not Claimed- Base Contract	956,945	1,274,482	317,537
1304.831R	TGV Design	Base	Not Claimed- Base Contract	-	-	-
1304.831Y	LFX Design	Base	Not Claimed- Base Contract	225,927	277,136	51,209
1304.8320	NXR Conformance	Base	Not Claimed- Base Contract	-	2,071	2,071
1304.8321	NCR - Scrap Processing	Base	Not Claimed- Base Contract	3,343,517	4,035,217	691,700
1304.8324	PRE / PRF - Grinding	Base	Not Claimed- Base Contract	1,907,562	2,303,385	395,823
1304.8325	PTE/PTF — Pellet Inspect & Sorting	Base	Not Claimed- Base Contract	326,626	396,055	69,429
1304.8326	PQE — Quality Control & Manual Sorting	Base	Not Claimed- Base Contract	-	444,859	444,859
1304.8327	PAD - Pellet Repackaging	Base	Not Claimed- Base Contract	250,030	277,167	27,137
1304.8328	PAR - Scrap Box Loading	Base	Not Claimed- Base Contract	371,422	478,804	107,382
1304.8329	PSE - Green Pellet Storage	Base	Not Claimed- Base Contract	466,501	629,885	163,383
1304.832A	KCB Design	Base	Not Claimed- Base Contract	229,253	160,747	(68,506)
1304.832G	KDA Design	Base	Not Claimed- Base Contract	343,594	330,971	(12,623)
1304.8330	PSF - Sintered Pellet Storage	Base	Not Claimed- Base Contract	578,166	717,822	139,656
1304.8331	PSI - Scrape Pellet Storage	Base	Not Claimed- Base Contract	921,984	1,146,863	224,879
1304.8332	PSJ - Ground & Sorted Pellet Storage	Base	Not Claimed- Base Contract	712,294	985,943	273,648
1304.8333	PML - Pellet Handling	Base	Not Claimed- Base Contract	3,694,380	4,201,902	507,522
1304.8336	GDE - Rod Decladding	Base	Not Claimed- Base Contract	546,308	932,184	385,876
1304.8338	SEK Helium Leak Test	Base	Not Claimed- Base Contract	323,770	220,636	(103,134)
1304.8344	LCT - Test Line	Base	Not Claimed- Base Contract	553,058	951,193	398,135
1304.8345	VDR - Filter Dismantling	Base	Not Claimed- Base Contract	-	12	12
1304.8346	DDP - UO2 Drum Emptying	Base	Not Claimed- Base Contract	407,403	537,418	130,015
1304.8348	KDM Conformance	Base	Not Claimed- Base Contract	88,262	477,130	388,868
1304.8363	KDA - Decanning (B)	Base	Not Claimed- Base Contract	1,813,719	3,415,974	1,602,255
1304.8365	KPG Sampling, Automatic Conformance	Base	Not Claimed- Base Contract	196,230	668,054	471,824
1304.8370	KPA 4010 Purification Cycle Conformance	Base	Not Claimed- Base Contract	50,402	233,571	183,169

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1304.8375	KDM - Milling (AFS) - PuO2 Can Handling	Base	Not Claimed- Base Contract	482,144	529,834	47,690
1304.8376	KDM 2000 - Prepolishing Milling Conformance	Base	Not Claimed- Base Contract	210,469	647,479	437,010
1304.8377	KDM 2200 Pre-Polishing Milling	Base	Not Claimed- Base Contract	569,061	707,373	138,312
1304.8378	KDR 1/2/3/4 ADO Conform	Base	Not Claimed- Base Contract	210,259	594	(209,665)
1304.8379	KDR - Recanning Unit	Base	Not Claimed- Base Contract	600,185	210,863	(389,322)
1304.8397	Struct. LLE - Aiken	Base	Not Claimed- Base Contract	352,677	305,686	(46,991)
1305.8315	LLP Pneumatic Transfer (33 mm)	Base	Not Claimed- Base Contract	1,397,356	1,807,734	410,378
1305.8316	LLP Pneumatic Transfer (76 mm)	Base	Not Claimed- Base Contract	738,814	986,221	247,407
1305.8318	NTP Pneumatic Transfer (133 mm)	Base	Not Claimed- Base Contract	785,457	1,085,049	299,592
1305.8325	PTE/PTF - Pellet Inspect & Sorting	Base	Not Claimed- Base Contract	1,667,730	1,593,203	(74,527)
1305.8326	PQE - QC & Manual Sorting	Base	Not Claimed- Base Contract	1,437,808	1,186,020	(251,789)
1305.8361	KCB - PuO2 Homogenization & Sampling	Base	Not Claimed- Base Contract	1,464,913	1,876,771	411,858
1305.8362	KCC - Canning	Base	Not Claimed- Base Contract	1,579,664	1,841,250	261,586
1305.8365	KPG - Liquid Sampling (W1)	Base	Not Claimed- Base Contract	938,353	900,405	(37,948)
1305.8366	KDB/KPF Electrolyzers (W9)	Base	Not Claimed- Base Contract	1,233,421	1,365,619	132,198
1305.8367	KCA - Oxalic Precip Metering Wheels	Base	Not Claimed- Base Contract	687,971	821,657	133,686
1305.8368	KDA - Dosing Hoppers (W6)	Base	Not Claimed- Base Contract	1,841,117	2,271,901	430,784
1305.8369	KPA/KPB - Settler Mixers (W7)	Base	Not Claimed- Base Contract	852,049	911,336	59,287
1305.8370	KPA 4010 Purification Cycle	Base	Not Claimed- Base Contract	394,454	377,100	(17,354)
1305.8371	KCA - Oxalic Precip Oxid Precip & Filter	Base	Not Claimed- Base Contract	552,846	718,321	165,475
1305.8372	KCA - Oxalic Precip Oxid Calcin Furn.	Base	Not Claimed- Base Contract	823,556	906,346	82,790
1305.8373	KCB - PuO2 Tumbler Mixer	Base	Not Claimed- Base Contract	543,854	532,877	(10,976)
1305.8374	KDD - Declorination / Dissolution	Base	Not Claimed- Base Contract	2,545,246	3,076,733	531,487
1305.8376	KDM - Milling (AFS)	Base	Not Claimed- Base Contract	1,994,225	1,955,112	(39,113)
1305.8378	KDR - Recanning Unit	Base	Not Claimed- Base Contract	1,587,663	1,711,309	123,646
1305.8380	KPB 1000 Solvent Recovery	Base	Not Claimed- Base Contract	687,875	779,190	91,315
1305.8381	KDM-Pre-Polishing MillingUnits6000-7400 Dsgn	Base	Not Claimed- Base Contract	1,156,174	1,119,284	(36,889)
1305.8399	Dosing Hopper - Structural Qualification	Base	Not Claimed- Base Contract	55,200	48,456	(6,744)
1306.8322	NPE/NPF - Homogenization & Pelletizing	Base	Not Claimed- Base Contract	1,439,711	1,439,629	(82)
1306.8323	PFE/PFF - Sintering Furnace	Base	Not Claimed- Base Contract	8	8	0
1306.8334	GME - Rod Cladding & Decontamination	Base	Not Claimed- Base Contract	5,886,780	6,773,734	886,955
1306.8339	SDK - Rod Inspection & Sorting	Base	Not Claimed- Base Contract	1,120,227	1,341,572	221,346
1306.8347	NBX/NBY - Ball Mining	Base	Not Claimed- Base Contract	2,287,881	2,641,655	353,774
1306.8348	KDM - Milling	Base	Not Claimed- Base Contract	901,055	937,277	36,222
1306.8349	NPG/H/I-Homoginization & Pelletizing Design	Base	Not Claimed- Base Contract	4,875,339	5,925,669	1,050,330
1306.8398	Struct. LLE - Bagnol	Base	Not Claimed- Base Contract	586,697	957,492	370,795
1307.831A	VDR	Base	Not Claimed- Base Contract	(99,558)	314,988	414,546
1307.831B	VDU	Base	Not Claimed- Base Contract	(51,218)	203,988	255,206
1307.831C	DCM	Base	Not Claimed- Base Contract	188,956	186,681	(2,275)
1307.831D	DCP	Base	Not Claimed- Base Contract	-	-	-
1307.831E	VDQ	Base	Not Claimed- Base Contract	-	-	-
1307.831F	VDT	Base	Not Claimed- Base Contract	-	-	-
1307.831G	GMK	Base	Not Claimed- Base Contract	26,858	152,250	125,392
1307.831H	SCE	Base	Not Claimed- Base Contract	370,314	-	(370,314)
1307.831J	SMK	Base	Not Claimed- Base Contract	401,273	188,086	(213,187)
1307.831K	STK	Base	Not Claimed- Base Contract	349,931	166,743	(183,188)
1307.831L	SXE	Base	Not Claimed- Base Contract	98,936	-	(98,936)
1307.831M	TAS	Base	Not Claimed- Base Contract	414	-	(414)
1307.831N	TCL/TCK/TGJ	Base	Not Claimed- Base Contract	572,675	-	(572,675)
1307.831P	TCP	Base	Not Claimed- Base Contract	7,405	249,043	241,638
1307.831Q	TGM	Base	Not Claimed- Base Contract	83,776	26,121	(57,655)

CB&I AREVA MOX Services, LLC.
MFFF Project Cost Growth by Cost Account and Claim Category

Schedule 6.11

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = B - A
				2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1307.831R	TGV	Base	Not Claimed- Base Contract	25,009	-	(25,009)
1307.831S	Grp 5.1	Base	Not Claimed- Base Contract	-	-	-
1307.831T	Grp 5.2	Base	Not Claimed- Base Contract	-	-	-
1307.831U	Grp 5.3	Base	Not Claimed- Base Contract	-	-	-
1307.831X	Grp 5.6	Base	Not Claimed- Base Contract	-	-	-
1307.831Y	Grp 5.8 / LFX	Base	Not Claimed- Base Contract	(100,098)	-	100,098
1307.832A	KCB	Base	Not Claimed- Base Contract	(37,503)	-	37,503
1307.832B	KCD	Base	Not Claimed- Base Contract	-	-	-
1307.832C	KPA	Base	Not Claimed- Base Contract	-	-	-
1307.832D	KPB	Base	Not Claimed- Base Contract	-	-	-
1307.832E	KPC	Base	Not Claimed- Base Contract	-	-	-
1307.832F	KWD	Base	Not Claimed- Base Contract	-	-	-
1307.832G	KDA	Base	Not Claimed- Base Contract	(186,468)	-	186,468
1308.832A	KCB	Base	Not Claimed- Base Contract	-	-	-
1308.832B	KCD	Base	Not Claimed- Base Contract	-	-	-
1308.832C	KPA	Base	Not Claimed- Base Contract	-	-	-
1308.832D	KPB	Base	Not Claimed- Base Contract	-	-	-
1308.832E	KPC	Base	Not Claimed- Base Contract	-	-	-
1308.832F	KWD	Base	Not Claimed- Base Contract	-	-	-
1308.832G	KDA	Base	Not Claimed- Base Contract	-	-	-
1308.832H	Grp 5.4	Base	Not Claimed- Base Contract	-	-	-
1308.832J	Grp 5.5	Base	Not Claimed- Base Contract	-	-	-
1309.839C	DCP Design	Base	Not Claimed- Base Contract	1,233,174	1,509,027	275,853
1309.839D	SXE DCR 10-0422	Base	Not Claimed- Base Contract	41,004	175,664	134,660
1309.83KU	K Unit Pumps and Valves Design	Base	Not Claimed- Base Contract	3,001,805	2,048,230	(953,575)
1310.83JL	JLE and LT TA VAR	Base	Not Claimed- Base Contract	-	501,479	501,479
1310.83LB	Lab Unit Glovebox Design	Base	Not Claimed- Base Contract	6,838,818	4,692,873	(2,145,945)
1310.83LE	Laboratory Responsible Engineers and STRs	Base	Not Claimed- Base Contract	713,444	1,893,632	1,180,188
1310.83TS	Task Support Requests	Base	Not Claimed- Base Contract	1,720,793	606,129	(1,114,664)
1311.83MF	Multi Fuel Design - DCRs	Base	Not Claimed- Base Contract	-	1,091,946	1,091,946
1400.8401	SDG Base Contract Pre-FY 2003	Base	Not Claimed- Base Contract	-	-	-
1401.8402	Management	Base	Not Claimed- Base Contract	10,336,701	15,178,727	4,842,026
1401.8403	Support Services	Base	Not Claimed- Base Contract	10,828,126	16,693,729	5,865,603
1401.8404	SDG Travel & Relocation DCS	Base	Not Claimed- Base Contract	2,797,063	3,595,869	798,807
1401.8405	Facility Space, Utilities Supplies & Services	Base	Not Claimed- Base Contract	584,903	585,591	687
1401.8418	Design Reviews	Base	Not Claimed- Base Contract	554,699	421,952	(132,747)
1401.8419	PLC & Supervisor for Fire Safety	Base	Not Claimed- Base Contract	-	-	-
1402.8406	Platform Hardware & Maintenance	Base	Not Claimed- Base Contract	5,668,945	4,064,808	(1,604,137)
1402.8407	Platform Hardware & Maintenance - Aiken	Base	Not Claimed- Base Contract	2,974,087	9,885,980	6,911,893
1402.8408	SDG Procurement Engineering Support	Base	Not Claimed- Base Contract	2,643,073	2,118,987	(524,085)
1402.8410	Standards	Base	Not Claimed- Base Contract	5,551,916	6,652,081	1,100,165
1402.8411	Networks	Base	Not Claimed- Base Contract	565,490	846,427	280,936
1402.8413	Laboratory Information Management System (LIMS)	Base	Not Claimed- Base Contract	1,086,571	2,159,452	1,072,881
1402.8414	Process PCs	Base	Not Claimed- Base Contract	3,867,684	2,715,494	(1,152,189)
1402.8417	RESERVED	Base	Not Claimed- Base Contract	-	-	-
1402.8477	PLC & Supervisor for Unit KWG	Base	Not Claimed- Base Contract	2,632	-	(2,632)
1402.8490	Simulation & Testing	Base	Not Claimed- Base Contract	2,350,845	3,516,527	1,165,682
1402.8497	CGD Embedded Software Evaluation Support	Base	Not Claimed- Base Contract	-	-	-
1403.8412	Manufacturing Management Information System (MMIS)	Base	Not Claimed- Base Contract	8,166,997	11,834,983	3,667,987
1404.8420	PLC's General	Base	Not Claimed- Base Contract	6,273,187	9,163,751	2,890,565
1404.8421	PLC & Supervisor for Unit DRS/DDP	Base	Not Claimed- Base Contract	265,395	317,978	52,583

CB&I AREVA MOX Services, LLC.
MFFF Project Cost Growth by Cost Account and Claim Category

Schedule 6.11

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = B - A
				2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1404.8422	PLC & Supervisor for Unit DCP/DCM	Base	Not Claimed- Base Contract	285,618	465,729	180,111
1404.8423	PLC & Supervisor for Unit DCE/NTP	Base	Not Claimed- Base Contract	359,379	542,483	183,104
1404.8424	PLC & Supervisor for Unit NDD	Base	Not Claimed- Base Contract	438,978	786,601	347,623
1404.8425	PLC & Supervisor for Unit NDP	Base	Not Claimed- Base Contract	682,677	1,075,897	393,220
1404.8426	PLC & Supervisor for Unit NBX/NBY	Base	Not Claimed- Base Contract	498,276	711,638	213,362
1404.8427	PLC & Supervisor for Unit NDS	Base	Not Claimed- Base Contract	669,188	1,036,479	367,291
1404.8428	PLC & Supervisor for Unit NXR	Base	Not Claimed- Base Contract	539,770	785,887	246,117
1404.8429	PLC & Supervisor for Unit NCR	Base	Not Claimed- Base Contract	468,698	803,389	334,691
1404.8430	PLC & Supervisor for Unit NTM	Base	Not Claimed- Base Contract	802,903	1,069,351	266,448
1404.8431	PLC & Supervisor for Unit NPE/NPF	Base	Not Claimed- Base Contract	1,006,420	1,530,655	524,235
1404.8432	PLC & Supervisor for Unit LTP	Base	Not Claimed- Base Contract	314,862	457,658	142,795
1404.8433	PLC & Supervisor for Unit PFE/PFF	Base	Not Claimed- Base Contract	917,858	1,351,119	433,261
1404.8434	PLC & Supervisor for Unit PRE/PRF	Base	Not Claimed- Base Contract	685,882	863,994	178,112
1404.8435	PLC & Supervisor for Unit PTE/PTF	Base	Not Claimed- Base Contract	572,730	976,017	403,287
1404.8436	PLC & Supervisor for Unit PQE	Base	Not Claimed- Base Contract	498,246	690,866	192,620
1404.8437	PLC & Supervisor for Unit PAD	Base	Not Claimed- Base Contract	345,162	717,963	372,801
1404.8438	PLC & Supervisor for Unit PAR	Base	Not Claimed- Base Contract	268,538	358,147	89,609
1404.8439	PLC & Supervisor for Unit PSE	Base	Not Claimed- Base Contract	313,991	509,018	195,027
1404.8440	PLC & Supervisor for Unit PSF	Base	Not Claimed- Base Contract	291,444	445,990	154,546
1404.8441	PLC & Supervisor for Unit PSI	Base	Not Claimed- Base Contract	520,594	699,084	178,490
1404.8442	PLC & Supervisor for Unit PSJ	Base	Not Claimed- Base Contract	294,578	346,367	51,789
1404.8443	PLC & Supervisor for Unit GME/GMF	Base	Not Claimed- Base Contract	1,036,693	2,391,966	1,355,273
1404.8444	PLC & Supervisor for Unit GMK	Base	Not Claimed- Base Contract	330,859	429,250	98,391
1404.8445	PLC & Supervisor for Unit GDE	Base	Not Claimed- Base Contract	252,310	382,174	129,864
1404.8446	PLC & Supervisor for Unit SXE	Base	Not Claimed- Base Contract	301,398	312,383	10,985
1404.8447	PLC & Supervisor for Unit SEK	Base	Not Claimed- Base Contract	213,769	501,346	287,577
1404.8448	PLC & Supervisor for Unit SDK	Base	Not Claimed- Base Contract	480,030	854,364	374,334
1404.8449	PLC & Supervisor for Unit SCE	Base	Not Claimed- Base Contract	280,661	389,985	109,324
1404.8450	PLC & Supervisor for Unit SMK/STK	Base	Not Claimed- Base Contract	264,614	444,178	179,564
1404.8451	PLC & Supervisor for Unit TGM	Base	Not Claimed- Base Contract	329,704	511,706	182,002
1404.8452	PLC & Supervisor for Unit TGV	Base	Not Claimed- Base Contract	365,675	76,311	(289,365)
1404.8453	PLC & Supervisor for Unit TAS	Base	Not Claimed- Base Contract	323,296	589,992	266,696
1404.8454	PLC & Supervisor for Unit TCK	Base	Not Claimed- Base Contract	232,217	216,548	(15,669)
1404.8455	PLC & Supervisor for Unit TCP	Base	Not Claimed- Base Contract	293,119	454,702	161,583
1404.8456	PLC & Supervisor for Unit TCL/TGJ	Base	Not Claimed- Base Contract	260,094	307,091	46,997
1404.8457	PLC & Supervisor for Unit TXE	Base	Not Claimed- Base Contract	-	-	-
1404.8458	PLC & Supervisor for Unit LCT	Base	Not Claimed- Base Contract	233,520	95,641	(137,879)
1404.8459	PLC & Supervisor for Unit VDO	Base	Not Claimed- Base Contract	289,040	-	(289,040)
1404.8460	PLC & Supervisor for Unit VDT	Base	Not Claimed- Base Contract	272,705	383,623	110,918
1404.8461	PLC & Supervisor for Unit VDR/VDU	Base	Not Claimed- Base Contract	307,916	29,649	(278,267)
1404.8485	PLC & Supervisor for Fire Safety	Base	Not Claimed- Base Contract	112,727	42,505	(70,222)
1404.8486	PLC & Supervisor for LGF	Base	Not Claimed- Base Contract	248,541	305,291	56,750
1404.8487	M&I - PRE/PRF	Base	Not Claimed- Base Contract	22,704	-	(22,704)
1405.8462	PLC & Supervisor for Unit KDD	Base	Not Claimed- Base Contract	618,915	863,150	244,235
1405.8463	PLC & Supervisor for Unit KDA	Base	Not Claimed- Base Contract	1,227,686	1,813,250	585,564
1405.8464	PLC & Supervisor for Unit KDB	Base	Not Claimed- Base Contract	362,161	455,895	93,734
1405.8466	PLC & Supervisor for Unit KPA	Base	Not Claimed- Base Contract	802,321	926,538	124,217
1405.8467	PLC & Supervisor for Unit KPB	Base	Not Claimed- Base Contract	294,556	317,577	23,021
1405.8468	PLC & Supervisor for Unit KPC	Base	Not Claimed- Base Contract	450,704	391,037	(59,667)
1405.8469	PLC for Unit LFX	Base	Not Claimed- Base Contract	145,197	45,858	(99,339)
1405.8470	PLC & Supervisor for Unit KPG	Base	Not Claimed- Base Contract	459,965	650,175	190,210

CB&I AREVA MOX Services, LLC.
MFFF Project Cost Growth by Cost Account and Claim Category

Schedule 6.11

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = B - A
				2007 Baseline	2012 Rebaseline with Addendum	Cost Growth
1405.8471	PLC & Supervisor for Unit LLP	Base	Not Claimed- Base Contract	361,211	703,119	341,908
1405.8472	PLC & Supervisor for Unit KCA	Base	Not Claimed- Base Contract	369,527	481,004	111,477
1405.8473	PLC & Supervisor for Unit KCB	Base	Not Claimed- Base Contract	463,461	714,164	250,703
1405.8474	PLC & Supervisor for Unit KCC	Base	Not Claimed- Base Contract	440,253	545,313	105,060
1405.8475	PLC & Supervisor for Unit KCD	Base	Not Claimed- Base Contract	374,760	395,510	20,750
1405.8476	PLC & Supervisor for Unit KWD	Base	Not Claimed- Base Contract	308,186	336,167	27,981
1405.8477	PLC & Supervisor for Unit KWG	Base	Not Claimed- Base Contract	360,871	373,415	12,545
1405.8478	PLC & Supervisor for Unit KDM	Base	Not Claimed- Base Contract	976,950	2,322,500	1,345,550
1405.8480	PLC & Sup. for Unit KUA/KUB/KUD/KUG/KUH	Base	Not Claimed- Base Contract	922,792	567,817	(354,975)
1405.8481	PLC & Supervisor for Ventilation	Base	Not Claimed- Base Contract	1,624,291	1,090,387	(533,904)
1405.8482	PLC & Supervisor for Electrical Distribution	Base	Not Claimed- Base Contract	734,153	513,569	(220,584)
1405.8483	PLC & Supervisor for Fluids	Base	Not Claimed- Base Contract	1,145,980	656,234	(489,746)
1405.8484	PLC & Supervisor for Unit KDR	Base	Not Claimed- Base Contract	401,926	53,068	(348,858)
1405.8486	PLC & Supervisor for LGF	Base	Not Claimed- Base Contract	-	-	-
1405.8490	Simulation & Testing	Base	Not Claimed- Base Contract	-	-	-
1405.8494	Independent Software Verification & Validation	Base	Not Claimed- Base Contract	-	-	-
1405.8496	SPLC Procurement Contract Oversight	Base	Not Claimed- Base Contract	1,015,728	12,237,107	11,221,379
1405.8497	CGD Embedded Software Evaluation Support	Base	Not Claimed- Base Contract	-	662,001	662,001
1406.8419	Software Analysis & Translation	Base	Not Claimed- Base Contract	2,911,338	2,911,871	533
1407.8409	PLC & Supervisor for Fire Safety	Base	Not Claimed- Base Contract	-	-	-
Base Subtotal				\$ 872,066,279	\$ 1,050,750,205	\$ 178,683,926
MFFF Project Total				\$ 3,650,888,759	\$ 6,614,501,585	\$ 2,963,612,827

Sources:

[A] May 2007 PRISM Data adjusted for budget transfers between July 2007 and September 2012

[B] 2012 contract proposal value as stated in December 2012 PRISM data and adjusted for 2012 Rebaseline Addendums

[C] Calculated

CB&I AREVA MOX Services, LLC.
MFFF 2012 Rebaseline with Addendum Project Cost by Cost Account

Schedule 6.2

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = [A]+[B]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
1003.8033	PUDC Procurement & Fabrication Support	Option 1	Process Units	\$ 11,010,319	\$ -	\$ 11,010,319
1004.8043	PUDC Site Construction Support	Option 1	Process Units	38,089,073	-	38,089,073
1004.8045	Software	Option 1	Process Units	15,422,427	-	15,422,427
1005.8056	PUDC Startup Support	Option 1	Process Units	19,280,579	-	19,280,579
1600.8601	Management / Admin	Option 1	Process Units	8,552,989	1,273,387	9,826,376
1600.8602	Project Controls	Option 1	Process Units	8,830,471	611,276	9,441,747
1600.8603	QA / QC	Option 1	Process Units	88,152	-	88,152
1601.8611	Business Travel	Option 1	Process Units	4,996,494	601,395	5,597,889
1602.8621	Supervision / Admin	Option 1	Process Units	4,493,560	-	4,493,560
1603.8631	Supervision / Admin	Option 1	Process Units	7,091,522	-	7,091,522
1603.8632	Job Living Expense	Option 1	Process Units	418,575	-	418,575
1603.8641	Management / Admin	Option 1	Process Units	-	-	-
1604.8641	Team Center Initiative	Option 1	Process Units	315,244	-	315,244
1605.8645	CA - NRC/CGIE - PUDC Support	Option 1	Process Units	5,663,563	-	5,663,563
1618.8748	PAD - Preplanning	Option 1	Process Units	-	-	-
1618.8749	PAR - Preplanning	Option 1	Process Units	-	-	-
1623.8785	Process Assembly Facilities	Option 1	Process Units	33,434,879	-	33,434,879
1701.8701	KCB - Homogenization - Sampling	Option 1	Process Units	6,460,991	(2,300)	6,458,691
1701.8702	KCC - PuO2 Decanning	Option 1	Process Units	4,995,575	(2,448)	4,993,127
1701.8703	KDA - PUO2 Decanning	Option 1	Process Units	18,004,798	1,425,471	19,430,268
1701.8704	KDM - Pre-Polishing Milling	Option 1	Process Units	28,577,139	4,207,320	32,784,460
1701.8705	KDR - Recanning	Option 1	Process Units	218,290	(79)	218,211
1701.8706	KPA GB 4010	Option 1	Process Units	2,642,021	(110,492)	2,531,529
1701.8751		Option 1	Process Units	-	-	-
1701.8777	KPG - Sampling Automatic	Option 1	Process Units	6,213,770	736,722	6,950,492
1701.8795	Long Lead Procurements	Option 1	Process Units	-	-	-
1702.8707	KCB 5000 Manufacturing	Option 1	Process Units	700,137	(49,369)	650,769
1702.8708		Option 1	Process Units	-	-	-
1702.8709		Option 1	Process Units	-	-	-
1702.8710		Option 1	Process Units	-	-	-
1702.8711		Option 1	Process Units	-	-	-
1702.8712	VDR - Filter Dismantling	Option 1	Process Units	61,433	-	61,433
1702.8713	VDU - Maintenance & Mechanical Dismantling	Option 1	Process Units	20,269	-	20,269
1702.8714		Option 1	Process Units	-	-	-
1703.8715	DCM - PuO2 3013 Storage	Option 1	Process Units	6,110,439	910,079	7,020,517
1703.8716	DCP - PuO2 Receiving	Option 1	Process Units	5,555,224	735,048	6,290,272
1703.8717	KDA - PUO2 Decanning (EQ - 6000 Density Measurement)	Option 1	Process Units	702,165	102,015	804,180
1703.8718		Option 1	Process Units	-	-	-
1703.8719		Option 1	Process Units	-	-	-
1704.8720	SDK - Rod Inspection and Sorting	Option 1	Process Units	2,370,253	2,759	2,373,011
1704.8721	SEK - Helium Leak Test	Option 1	Process Units	1,516,452	220,756	1,737,208
1705.8722	GMK - Rod Tray Loading	Option 1	Process Units	1,126,504	35,886	1,162,390
1705.8723	SCE - Rod Scanning	Option 1	Process Units	3,268,302	156,557	3,424,860
1705.8724	SMK - Rod Tray Handling	Option 1	Process Units	2,050,666	437,502	2,488,168
1705.8725	STK - Rod Storage	Option 1	Process Units	4,021,354	204,924	4,226,278
1705.8726	SXE - X Ray Inspection	Option 1	Process Units	2,200,967	164,450	2,365,417
1705.8727	TAS - Assembly Handling and Storage	Option 1	Process Units	8,746,060	612,163	9,358,223
1705.8728	TCK - Assembly Dry Cleaning	Option 1	Process Units	831,891	(85,910)	745,981
1705.8729	TCL - Assembly Final Inspection	Option 1	Process Units	1,188,159	86,862	1,275,021
1705.8730	TGJ - Reserve Pit	Option 1	Process Units	358,421	-	358,421
1705.8731	TCP - Assembly Dimensional Inspection	Option 1	Process Units	2,096,378	(8,584)	2,087,795

CB&I AREVA MOX Services, LLC.
MFFF 2012 Rebaseline with Addendum Project Cost by Cost Account

Schedule 6.2

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = [A]+[B]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
1705.8732	TGM - Assembly Mockup Loading	Option 1	Process Units	2,788,742	107,270	2,896,012
1705.8733	TGV - Assembly Mounting	Option 1	Process Units	761,447	55,824	817,271
1706.8734	PSE - Green Pellet Storage	Option 1	Process Units	7,971,103	(245,815)	7,725,288
1706.8735	PSF - Sintering Pellet Storage	Option 1	Process Units	7,934,901	(389,812)	7,545,089
1706.8736	PSI - Scrap Pellet Storage	Option 1	Process Units	8,666,368	(340,288)	8,326,080
1706.8737	PSJ - Ground & Sorted Pellet Storage	Option 1	Process Units	7,977,167	723,484	8,700,651
1707.8738	Lab Equip - LRD/LPG/LBT/LAC/KLN/KLL/KLK/KLH	Option 1	Process Units	8,283,907	985,833	9,269,740
1707.8739	Lab Equip - LME/LAU/FLT	Option 1	Process Units	4,954,948	550,206	5,505,154
1707.8740	Lab Equip - LSR/LCP/KLJ	Option 1	Process Units	8,914,063	1,944,369	10,858,433
1707.8741	Lab Equip - LPS/LET/LER/LDS/KLM/KLF/KLB/KLC/KLD	Option 1	Process Units	10,784,091	2,224,365	13,008,455
1707.8742	Lab Equip - KLO/KLI/KLG/KLA/KLE	Option 1	Process Units	8,914,177	1,411,224	10,325,401
1707.8743	Lab Equip - LSG/LLI	Option 1	Process Units	641,331	-	641,331
1707.8744	Lab Equip - LFX	Option 1	Process Units	2,141,710	227,001	2,368,710
1708.8745	DCE - PUO2 Buffer Storage	Option 1	Process Units	11,028,503	834,042	11,862,545
1708.8746	GDE - Rod Decladding	Option 1	Process Units	2,839,628	938,414	3,778,042
1708.8747	GME - Rod Cladding and Decontamination	Option 1	Process Units	24,887,266	1,621,347	26,508,613
1708.8748	PAD - Preplanning	Option 1	Process Units	2,096,746	17,801	2,114,547
1708.8749	PAR - Preplanning	Option 1	Process Units	2,061,538	(15,095)	2,046,442
1708.8750	PML - Pellet Handling	Option 1	Process Units	23,423,047	3,107,163	26,530,210
1708.8751	PQE - Quality Control & Manual Sorting	Option 1	Process Units	4,197,483	3,235,272	7,432,755
1708.8752	PRE - Pellet Grinding	Option 1	Process Units	7,057,830	(16,839)	7,040,991
1708.8753	PRF - Pellet Grinding	Option 1	Process Units	6,589,086	337,726	6,926,812
1708.8754	PTE - Pellet Inspection & Sorting	Option 1	Process Units	5,809,385	(3,310)	5,806,075
1708.8755	PTF - Pellet Inspection & Sorting	Option 1	Process Units	5,397,121	296,665	5,693,786
1709.8756	DDP - UO2 Drum Emptying	Option 1	Process Units	2,148,561	709,672	2,858,233
1709.8757	LCT - Test Line (part of laboratory)	Option 1	Process Units	2,620,521	454,130	3,074,651
1709.8758	NBX - Primary Blend Ball Milling	Option 1	Process Units	3,504,186	312,996	3,817,183
1709.8759	NBY - Scrap Ball Milling	Option 1	Process Units	2,665,843	567,828	3,233,671
1709.8760	NCR - Scrap Processing	Option 1	Process Units	6,565,420	2,469,813	9,035,233
1709.8761	NDD - PUO2 Can Receiving and Emptying	Option 1	Process Units	3,158,290	645,475	3,803,765
1709.8762	NDP - Primary Dosing	Option 1	Process Units	8,374,307	3,803,209	12,177,516
1709.8763	NDS - Final Dosing	Option 1	Process Units	10,860,994	4,364,668	15,225,662
1709.8764	NTM - Jar Storage and Handling	Option 1	Process Units	17,976,068	9,085,523	27,061,590
1709.8765	NXR - Powder Auxiliary	Option 1	Process Units	4,965,186	1,975,494	6,940,680
1710.8766	NPG - Homogenization & Pelletizing	Option 1	Process Units	13,222,976	1,184,650	14,407,626
1710.8767	NPH - Homogenization & Pelletizing	Option 1	Process Units	12,748,691	1,210,439	13,959,131
1710.8768	NPI - Homogenization & Pelletizing	Option 1	Process Units	2,312,970	(832)	2,312,137
1711.8769	KLA - Precipitation - Filtration - Oxidation	Option 1	Process Units	7,093,160	1,427,685	8,520,845
1711.8770	KCB GB1000 - Homogenization - Sampling	Option 1	Process Units	2,400,481	279,260	2,679,741
1711.8771	KDA - PUO2 Decanning	Option 1	Process Units	759,053	239,438	998,491
1711.8772	KDB - Dissolution	Option 1	Process Units	7,725,070	1,866,816	9,591,887
1711.8773	KDD - Dissolution of Chlorinated Feed	Option 1	Process Units	16,174,055	4,404,511	20,578,565
1711.8774	KDM - Pre-Polishing Milling (CB6400/7400)	Option 1	Process Units	1,004,935	375,657	1,380,592
1711.8775	KPA GB4000	Option 1	Process Units	2,496,644	882,101	3,378,746
1711.8776	KPB GB1000	Option 1	Process Units	1,409,807	368,014	1,777,821
1711.8777	KPG - Sampling Automatic	Option 1	Process Units	55,253	-	55,253
1711.8778	LLP - Pneumatic Transfer (33mm, PUO2 cans) Equipment	Option 1	Process Units	6,088,458	763,577	6,852,035
1711.8779	LTP - Pneumatic Transfer (76mm, PUO2 cans) Equipment	Option 1	Process Units	4,299,047	106,618	4,405,665
1711.8780	NTP - Pneumatic Transfer (133mm, PUO2 cans) Equipment	Option 1	Process Units	6,974,766	(301,158)	6,673,608
1712.8781	NPP - Additives Preparation	Option 1	Process Units	1,161,650	-	1,161,650
1712.8782	PFE/PFF - Sintering Furnace	Option 1	Process Units	65,184,914	6,288,048	71,472,962

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Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = [A]+[B]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
1712.8783	TXE - Assembly Packaging	Option 1	Process Units	1,416,342	68,235	1,484,577
1712.8784	DRS - UO2 Receiving and Storage	Option 1	Process Units	-	-	-
1712.8786	PFF - Sintering Furnace	Option 1	Process Units	-	-	-
1713.8790	Process Unit Support	Option 1	Process Units	6,239,241	-	6,239,241
1713.8791	Assembly Suspense Accounts	Option 1	Process Units	-	-	-
1714.8708	KCD - Oxalic Mother Liquors Recovery Unit	Option 1	Process Units	745,564	(2,898)	742,665
1714.8709	KPA (GB2000, 2010, 3000, 8000, 8510) Purification Cycle	Option 1	Process Units	3,154,417	119,541	3,273,958
1714.8710	KPC - Nitric Acid Recovery Liquid Ring Pump GB	Option 1	Process Units	742,421	27,060	769,481
1714.8711	KWD - Aqueous Waste Reception	Option 1	Process Units	1,240,513	36,314	1,276,827
1714.8714	KPB (GB2000) Solvent Recovery Unit	Option 1	Process Units	535,695	28,505	564,199
1715.8716	DCP - PuO2 Receiving	Option 1	Process Units	157,000	-	157,000
1715.8718	VDQ Waste Storage	Option 1	Process Units	639	-	639
1715.8719	VDT Waste Nuclear Count - Drum Hdling & NDA P	Option 1	Process Units	4,168,817	299,190	4,468,007
1716.8791	Assembly BOAs Accounts	Option 1	Process Units	50,274,011	-	50,274,011
1716.8795	Long Lead Procurements	Option 1	Process Units	47,172,382	1,933,293	49,105,674
1716.8796	ATG Spares Procurements	Option 1	Process Units	5,187,473	-	5,187,473
1717.8792	Self-Perform Suspense Accounts	Option 1	Process Units	726,190	-	726,190
1717.8793	Design Modifications	Option 1	Process Units	373,013	-	373,013
1717.8797	Unexpected Outsource Costs	Option 1	Process Units	192,886	-	192,886
1717.8798	Duty and Shipping Costs	Option 1	Process Units	2,461,227	-	2,461,227
1717.8799	REA Exposure	Option 1	Process Units	22,390,845	(22,390,845)	-
1717.87MA	Maintenance Program, Layup/In-Storage	Option 1	Process Units	340,078	-	340,078
1745.4500	MP Dismantling Units	Option 1	Process Units	-	-	-
1745.4510	MP Receiving & Storage Units	Option 1	Process Units	-	-	-
1745.4520	MP Ball Milling & Pneumatic Transfers	Option 1	Process Units	-	-	-
1745.4530	MP Sintering Furnances	Option 1	Process Units	-	-	-
1745.4540	MP Powder & Pellets	Option 1	Process Units	-	-	-
1745.4550	MP Pellet Storage	Option 1	Process Units	-	-	-
1745.4570	MP Rods & Assemblies	Option 1	Process Units	-	-	-
1745.4580	MP Assembly Packaging Crane	Option 1	Process Units	-	-	-
1745.4590	MP Laboratories	Option 1	Process Units	-	-	-
Process Units - Direct Subtotal				\$ 805,317,150	\$ 53,474,262	\$ 858,791,412
0601.6000	Project Office Operations	Option 1	Hotel Load	\$ 9,225,064	\$ -	\$ 9,225,064
0601.6001	Communications	Option 1	Hotel Load	7,137,056	-	7,137,056
0601.6002	Special Projects	Option 1	Hotel Load	9,995,270	-	9,995,270
0601.6003	Employee Incentive Program	Option 1	Hotel Load	113	-	113
0601.6004	Project Off-Site Operations	Option 1	Hotel Load	11,006,133	-	11,006,133
0601.6005	Projects Oversight	Option 1	Hotel Load	16,667,313	-	16,667,313
0601.6009	Relocations	Option 1	Hotel Load	38,306,079	-	38,306,079
0602.6010	Project Controls	Option 1	Hotel Load	42,470,552	-	42,470,552
0602.6011	Risk Management	Option 1	Hotel Load	753,578	-	753,578
0603.6020	QA Program Management & Administration	Option 1	Hotel Load	1,437,299	-	1,437,299
0603.6021	Quality Engineering	Option 1	Hotel Load	2,861,506	-	2,861,506
0603.6022	Audit & Surveillance	Option 1	Hotel Load	1,363,028	-	1,363,028
0603.6023	Quality Control - Labor	Option 1	Hotel Load	2,400,403	-	2,400,403
0603.6024	QA / QC Assembly Group Support	Option 1	Hotel Load	536,953	-	536,953
0603.6025	MOX Potential Back Charges	Option 1	Hotel Load	222,526	-	222,526
0604.6030	PS&A Administrative Support	Option 1	Hotel Load	40,294,967	-	40,294,967
0604.6031	Human Resources	Option 1	Hotel Load	25,211,837	-	25,211,837
0604.6032	Training	Option 1	Hotel Load	20,542,206	-	20,542,206

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Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = [A]+[B]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
0604.6033	Information and Personnel Security	Option 1	Hotel Load	18,575,630	-	18,575,630
0604.6034	Record Center	Option 1	Hotel Load	14,391,158	-	14,391,158
0604.6035	Internal Communication	Option 1	Hotel Load	134,969	-	134,969
0604.6036	Accounting, Treasury & Invoice Operations	Option 1	Hotel Load	24,577,396	-	24,577,396
0604.6037	Asset Management	Option 1	Hotel Load	359,715	-	359,715
0604.6038	Facility Management	Option 1	Hotel Load	22,202,181	-	22,202,181
0604.6039	Facility - Mini-MAC Building	Option 1	Hotel Load	123,501	-	123,501
0604.6042	PERC\$	Option 1	Hotel Load	818,632	-	818,632
0604.6045	Gateway Project	Option 1	Hotel Load	738,370	-	738,370
0604.6046	Shaw Nuclear Exchange	Option 1	Hotel Load	-	-	-
0604.6047	Legal Expenses	Option 1	Hotel Load	15,505,975	-	15,505,975
0604.6048	EMC Corporation Matter	Option 1	Hotel Load	1,557	-	1,557
0604.6049	952.204-77 Comp Security	Option 1	Hotel Load	699	-	699
0605.6040	Contract Management & Administration	Option 1	Hotel Load	18,569,434	-	18,569,434
0606.6050	Procurement	Option 1	Hotel Load	8,809,637	-	8,809,637
0606.6051	Infrastructure Procurement	Option 1	Hotel Load	6,141,727	-	6,141,727
0606.6052	Construction Procurement	Option 1	Hotel Load	14,836,392	-	14,836,392
0606.6053	Process Equipment Procurement	Option 1	Hotel Load	16,683,838	-	16,683,838
0606.6054	Process Unit Procurement	Option 1	Hotel Load	464,936	-	464,936
0606.6055	Property Management	Option 1	Hotel Load	5,335,247	-	5,335,247
0606.6056	Employment Eligibility Verification	Option 1	Hotel Load	851	-	851
0606.6057	Engineered Equipment Group	Option 1	Hotel Load	8,256,992	-	8,256,992
0606.6058	Procurement Corrective Action NRC Commercial Grade Dedication	Option 1	Hotel Load	-	-	-
0606.6059	Procurement Support Services	Option 1	Hotel Load	4,960,099	-	4,960,099
0606.6068	S&R and Warehouses	Option 1	Hotel Load	31,678,298	-	31,678,298
0606.6069	Materials Management	Option 1	Hotel Load	5,942,192	-	5,942,192
0607.6060	IT Support	Option 1	Hotel Load	47,929,477	-	47,929,477
0607.6061	IT Other Direct Costs (ODCs)	Option 1	Hotel Load	57,883,204	-	57,883,204
0607.6062	Team Center Initiative	Option 1	Hotel Load	2,116,187	-	2,116,187
0611.6000	Project Office Operations	Option 1	Hotel Load	833,463	-	833,463
0611.6001	Communications	Option 1	Hotel Load	1,164,936	-	1,164,936
0611.6002	Special Projects	Option 1	Hotel Load	1,270,591	-	1,270,591
0611.6004	Project Off-Site Operations	Option 1	Hotel Load	1,224,027	-	1,224,027
0611.6005	Projects Oversight	Option 1	Hotel Load	1,716,325	-	1,716,325
0611.6009	Relocations	Option 1	Hotel Load	1,138,970	-	1,138,970
0611.6090	Project Systems Assessment - NNSA (OPC)	Option 1	Hotel Load	239,770	-	239,770
0611.6091	EVMS Process Improvements Development ODC (OPC)	Option 1	Hotel Load	18,475	-	18,475
0612.6010	Project Controls	Option 1	Hotel Load	2,913,451	-	2,913,451
0614.6030	Program Support and Legal Administration	Option 1	Hotel Load	4,555,007	-	4,555,007
0614.6031	Human Resources	Option 1	Hotel Load	493,111	-	493,111
0614.6032	Training	Option 1	Hotel Load	3,519,268	-	3,519,268
0614.6034	Record Center	Option 1	Hotel Load	1,300,316	-	1,300,316
0614.6036	Accounting, Treasury & Invoice Operations	Option 1	Hotel Load	2,876,441	-	2,876,441
0614.6038	Facility Management	Option 1	Hotel Load	1,507,135	-	1,507,135
0614.6047	Legal Expenses	Option 1	Hotel Load	1,665,825	-	1,665,825
0615.6040	Contract Management & Administration	Option 1	Hotel Load	2,043,913	-	2,043,913
0616.6050	Procurement	Option 1	Hotel Load	721,704	-	721,704
0616.6051	Infrastructure Procurement	Option 1	Hotel Load	532,976	-	532,976
0616.6052	Construction Procurement	Option 1	Hotel Load	1,654,810	-	1,654,810
0616.6053	Process Equipment Procurement	Option 1	Hotel Load	290,251	-	290,251
0616.6055	Property Management	Option 1	Hotel Load	1,305,869	-	1,305,869

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				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
0616.6057	Engineered Equipment Group	Option 1	Hotel Load	569,012	-	569,012
0616.6059	Procurement Support Services	Option 1	Hotel Load	412,851	-	412,851
0616.6068	S&R and Warehouses	Option 1	Hotel Load	1,319,145	-	1,319,145
0616.6069	Materials Management	Option 1	Hotel Load	510,097	-	510,097
0617.6060	IT Support	Option 1	Hotel Load	6,586,251	-	6,586,251
0617.6061	IT Other Direct Costs (ODCs)	Option 1	Hotel Load	4,239,122	-	4,239,122
1000.8001	Management / Admin	Option 1	Hotel Load	20,831,188	-	20,831,188
1000.8002	Engineering Services Project Controls	Option 1	Hotel Load	9,548,015	-	9,548,015
1000.8003	Engineering Assurance	Option 1	Hotel Load	8,647,662	-	8,647,662
1000.8004	Technical Coordination	Option 1	Hotel Load	6,527,963	-	6,527,963
1000.8005	Document Management	Option 1	Hotel Load	3,991,953	-	3,991,953
1000.8006	Engineering Training	Option 1	Hotel Load	10,484,495	174,341	10,658,836
1001.8011	Business Travel	Option 1	Hotel Load	3,957,791	42,205	3,999,996
1001.8012	Temporary Assignments	Option 1	Hotel Load	10,279,504	221,219	10,500,723
1001.8019	Other ODCs	Option 1	Hotel Load	9,311,446	(1,691,356)	7,620,090
1002.8021	Supervision / Admin	Option 1	Hotel Load	1,349,621	-	1,349,621
1002.8022	Chemical	Option 1	Hotel Load	475,791	-	475,791
1002.8023	Mechanical	Option 1	Hotel Load	13,083	-	13,083
1002.8024	Laboratory	Option 1	Hotel Load	60,629	-	60,629
1002.8025	Balance of Plant (BOP)	Option 1	Hotel Load	37,924	-	37,924
1002.8026	Safety	Option 1	Hotel Load	73,015	-	73,015
1002.8027	Reference Plant Support	Option 1	Hotel Load	105,977	-	105,977
1003.8031	Supervision / Admin	Option 1	Hotel Load	4,537,192	-	4,537,192
1003.8032	Civil / Structural	Option 1	Hotel Load	39,619,718	955,412	40,575,130
1003.8034	Electrical / I&C Site Construction Support	Option 1	Hotel Load	27,874,584	1,308,749	29,183,333
1003.8035	Chemical-Construction Support	Option 1	Hotel Load	18,620,548	7,645	18,628,193
1003.8036	Mechanical – Construction Support	Option 1	Hotel Load	8,381,180	146,388	8,527,568
1003.8037	Plant Configuration Site Construction Support	Option 1	Hotel Load	9,041,717	-	9,041,717
1003.8038	Engineering Mechanics - Site Construction Support	Option 1	Hotel Load	14,380,995	5,949,091	20,330,086
1003.8042	Civil / Structural	Option 1	Hotel Load	-	-	-
1004.8041	Supervision / Admin	Option 1	Hotel Load	1,905,609	-	1,905,609
1004.8042	Civil / Structural	Option 1	Hotel Load	1,474,971	-	1,474,971
1004.8044	Electrical / I&C Procurement and Fabrication Support	Option 1	Hotel Load	2,558,850	37,044	2,595,894
1004.8046	Chemical-Procurement/Fabrication Support	Option 1	Hotel Load	19,414,143	230,243	19,644,386
1004.8047	Mechanical – Procurement/Fabrication Support	Option 1	Hotel Load	1,304,971	-	1,304,971
1004.8048	Plant Configuration - Construction, Procurement & Fabrication Support	Option 1	Hotel Load	5,747,615	-	5,747,615
1004.8049	Equipment Qualification	Option 1	Hotel Load	9,290,858	98,322	9,389,180
1005.8051	Supervision / Admin	Option 1	Hotel Load	649,247	-	649,247
1005.8052	Mechanical – Startup & Operations Support	Option 1	Hotel Load	189,407	-	189,407
1005.8053	Electrical / IC Startup and Operations Support	Option 1	Hotel Load	3,083,753	29,240	3,112,993
1005.8054	Civil/ Structural Startup Support	Option 1	Hotel Load	-	-	-
1005.8055	Engineering Mechanics Startup Support	Option 1	Hotel Load	-	-	-
1005.8057	Chemical/Mechanical Engineering Startup Support	Option 1	Hotel Load	548,121	-	548,121
1005.8058	Software Modifications	Option 1	Hotel Load	9,113	-	9,113
1005.8059	Plant Configuration	Option 1	Hotel Load	-	-	-
1006.8001	Management / Admin ODC	Option 1	Hotel Load	1,407,038	-	1,407,038
1006.8002	Project Controls OPC	Option 1	Hotel Load	262,767	-	262,767
1006.8003	Engineering Assurance ODC	Option 1	Hotel Load	446,932	-	446,932
1006.8005	Document Management	Option 1	Hotel Load	169,402	-	169,402
1006.8006	Engineering Training	Option 1	Hotel Load	131,226	-	131,226
1006.8011	Business Travel	Option 1	Hotel Load	5,563	-	5,563

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				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
1006.8049	Engineering Mechanics	Option 1	Hotel Load	925,155	-	925,155
1006.8052	Process Unit Responsible Engineer Startup Support	Option 1	Hotel Load	3,919,092	30,597	3,949,689
1006.8053	Electrical / IC Startup Support	Option 1	Hotel Load	3,540,890	-	3,540,890
1006.8054	Civil/ Structural Startup Support	Option 1	Hotel Load	1,226,667	-	1,226,667
1006.8055	Engineering Mechanics Startup Support	Option 1	Hotel Load	1,721,000	-	1,721,000
1006.8057	Chemical/ Mechanical Engineering Startup Support	Option 1	Hotel Load	5,571,346	-	5,571,346
1006.8059	Plant Configuration	Option 1	Hotel Load	1,136,403	-	1,136,403
1100.8101	Management / Administration	Option 1	Hotel Load	2,227,893	-	2,227,893
1100.8102	NSA Project Controls	Option 1	Hotel Load	1,491,371	-	1,491,371
1101.8111	Business Travel	Option 1	Hotel Load	504,806	-	504,806
1101.8112	Temporary Assignments	Option 1	Hotel Load	55,790	-	55,790
1101.8119	Other ODCs (Legal & S/C Costs)	Option 1	Hotel Load	1,622,276	-	1,622,276
1102.8121	Defense of Licensing Basis	Option 1	Hotel Load	11,460,643	-	11,460,643
1102.8122	Compliance Program	Option 1	Hotel Load	2,054,829	-	2,054,829
1102.8123	Condition Reports Work Resolution	Option 1	Hotel Load	205,042	-	205,042
1103.8132	Chemical Safety Support	Option 1	Hotel Load	4,012,744	-	4,012,744
1103.8133	Laboratory Support	Option 1	Hotel Load	210,173	-	210,173
1104.8141	ES&H Program	Option 1	Hotel Load	1,229,596	-	1,229,596
1104.8142	Radiological Protection	Option 1	Hotel Load	5,869	-	5,869
1104.8143	Environmental Protection Program	Option 1	Hotel Load	823,040	-	823,040
1104.8144	Industrial Safety Program	Option 1	Hotel Load	638,299	-	638,299
1104.8145	Waste Management Program	Option 1	Hotel Load	334,145	-	334,145
1104.8146	Fitness for Duty Program	Option 1	Hotel Load	515,082	-	515,082
1104.8147	Emergency Response Program	Option 1	Hotel Load	94,698	-	94,698
1104.8148	Employee Safety Incentive Program	Option 1	Hotel Load	79,977	-	79,977
1104.8149	Construction - Safety Engineering Support	Option 1	Hotel Load	459,000	-	459,000
1105.8151	Criticality Safety Procurement & Const Support	Option 1	Hotel Load	4,035,676	-	4,035,676
1105.8154	Nuclear Radiation Protections	Option 1	Hotel Load	2,291,377	-	2,291,377
1105.8155	Nuclear Radiation & Criticality Monitoring	Option 1	Hotel Load	1,793	-	1,793
1106.8161	Defense of the Safety Basis	Option 1	Hotel Load	4,087,071	-	4,087,071
1109.8191	NRC Costs	Option 1	Hotel Load	57,777,922	-	57,777,922
1109.8192	Physical Security Program	Option 1	Hotel Load	12,193,107	-	12,193,107
1109.8193	Material Control & Accountability Program	Option 1	Hotel Load	13,452,777	-	13,452,777
1110.8101	Management / Administration	Option 1	Hotel Load	226,869	-	226,869
1110.8102	Project Controls	Option 1	Hotel Load	102,632	-	102,632
1112.8121	Defense of Licensing Basis	Option 1	Hotel Load	1,524,420	-	1,524,420
1113.8132	Chemical Safety Support	Option 1	Hotel Load	567,575	-	567,575
1115.8151	Criticality Safety Procurement & Const Support	Option 1	Hotel Load	951,357	-	951,357
1115.8154	Nuclear Radiation Protections	Option 1	Hotel Load	329,182	-	329,182
1116.8161	Defense of the Safety Basis	Option 1	Hotel Load	493,859	-	493,859
1802.8820	Supplies & Services	Option 1	Hotel Load	355,064	1,812,630	2,167,694
1802.8821	Office Equipment, Furniture Leases & Purchases	Option 1	Hotel Load	4,278,754	-	4,278,754
1803.8830	Temporary Site Features & Services	Option 1	Hotel Load	518,980	-	518,980
1803.8832	Buildings Shops / Trailers	Option 1	Hotel Load	22,521,397	-	22,521,397
1803.8833	Utilities & Services	Option 1	Hotel Load	45,585,905	-	45,585,905
1803.8850	Misc Field Construction Supplies	Option 1	Hotel Load	-	-	-
1804.8840	Equipment	Option 1	Hotel Load	43,706,780	-	43,706,780
1804.8842	Construction Materials Management	Option 1	Hotel Load	5,794,327	-	5,794,327
1804.8843	Tools	Option 1	Hotel Load	754,407	-	754,407
1804.8850	Temporary Site Features & Services	Option 1	Hotel Load	-	-	-
1805.8850	Miscellaneous Field Supplies & Services	Option 1	Hotel Load	72,941,704	-	72,941,704

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Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = [A]+[B]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
1805.8851	Foreign National Escorts	Option 1	Hotel Load		-	-
2000.9001	Management / Administration	Option 1	Hotel Load	12,719,516	-	12,719,516
2000.9002	Project Controls	Option 1	Hotel Load	1,844,714	-	1,844,714
2001.9014	Test Equipment & Consumables	Option 1	Hotel Load	1,910,308	-	1,910,308
2002.9021	Generic Test Documents	Option 1	Hotel Load	143,702	-	143,702
2002.9024	Technical Support	Option 1	Hotel Load	139,892	-	139,892
2002.9026	Cold Startup Training	Option 1	Hotel Load	1,211,069	-	1,211,069
2004.9047	Turnover & Logistics	Option 1	Hotel Load	2,852,716	-	2,852,716
2006.9060	Maintenance Program, Layup/In-Storage	Option 1	Hotel Load	4,473,849	-	4,473,849
2010.9101	Management / Administration - IPT	Option 1	Hotel Load	31,409,273	-	31,409,273
2010.9102	Project Controls - IPT	Option 1	Hotel Load	4,389,193	-	4,389,193
2010.9103	Program Support for Start-up	Option 1	Hotel Load	3,425,955	-	3,425,955
2011.9117	Spare Parts - IPT	Option 1	Hotel Load	3,630,728	-	3,630,728
2012.9124	Technical Support - IPT	Option 1	Hotel Load	2,130,381	-	2,130,381
2012.9126	Cold Startup Training - IPT	Option 1	Hotel Load	6,130,662	-	6,130,662
2100.9501	Management / Administration	Option 1	Hotel Load	22,482,010	-	22,482,010
2100.9502	Project Controls	Option 1	Hotel Load	4,341,736	-	4,341,736
2100.9503	Quality Assurance	Option 1	Hotel Load		-	-
2100.9504	Environment, Safety & Health	Option 1	Hotel Load		-	-
2100.9506	PS&A	Option 1	Hotel Load		-	-
2101.9511	Business Travel	Option 1	Hotel Load	2,028,587	-	2,028,587
2101.9512	Temporary Assignments	Option 1	Hotel Load	6,462,252	-	6,462,252
2101.9515	Consumables	Option 1	Hotel Load	2,438,200	-	2,438,200
2101.9518	Software	Option 1	Hotel Load	3,954,314	-	3,954,314
2102.9522	Training at Richland	Option 1	Hotel Load	1,182,981	-	1,182,981
2102.9523	Training at LaHague	Option 1	Hotel Load	3,675,088	-	3,675,088
2102.9524	Training at Melox	Option 1	Hotel Load	5,648,433	-	5,648,433
2102.9525	Other Training	Option 1	Hotel Load	85,723	-	85,723
2102.9526	Operations Activities	Option 1	Hotel Load	157,198	-	157,198
2102.9527	Operations Process Simulator	Option 1	Hotel Load	1,584,317	-	1,584,317
2102.9528	Reference Plant Training Direct Costs	Option 1	Hotel Load	108,059,327	-	108,059,327
2103.9531	Organizational Documents	Option 1	Hotel Load	4,215,983	-	4,215,983
2103.9532	Laboratory Procedures	Option 1	Hotel Load	2,677,948	-	2,677,948
2103.9533	Maintenance Procedures	Option 1	Hotel Load	4,593,634	-	4,593,634
2103.9534	Operating Procedures	Option 1	Hotel Load	8,148,158	-	8,148,158
2103.9535	Hot Startup Planning	Option 1	Hotel Load	1,121,733	-	1,121,733
2103.9536	Turnover to Operations	Option 1	Hotel Load		-	-
2103.9537	Support to Other groups	Option 1	Hotel Load	7,136,528	-	7,136,528
2104.9541	Early Option 2 Proposal Development (Labor)	Option 1	Hotel Load	672,700	-	672,700
2105.9550	Aqueous Polishing Activities	Option 1	Hotel Load	3,216,088	-	3,216,088
2105.9551	Powder Pellet Activities	Option 1	Hotel Load	6,619,357	-	6,619,357
2105.9552	Rod Bundle Activities	Option 1	Hotel Load	2,473,008	-	2,473,008
2105.9553	Balance of Plant Activities	Option 1	Hotel Load	6,595,420	-	6,595,420
2105.9554	Laboratory Activities	Option 1	Hotel Load	14,901,345	-	14,901,345
2105.9555	Maintenance Activities	Option 1	Hotel Load	31,130,877	-	31,130,877
2105.9556	Logistics / Warehousing	Option 1	Hotel Load	2,675,586	-	2,675,586
2105.9557	System Engineering Activities	Option 1	Hotel Load	12,540,813	-	12,540,813
2201.8138	Relocation	Option 1	Hotel Load	20,912	-	20,912
2201.8141	ES&H Program	Option 1	Hotel Load	8,149,431	-	8,149,431
2201.8143	Environmental Protection Program	Option 1	Hotel Load	5,433,744	-	5,433,744
2201.8144	Industrial Safety Program	Option 1	Hotel Load	930,909	-	930,909

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Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = [A]+[B]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
2201.8145	Waste Management Program	Option 1	Hotel Load	3,318,918	-	3,318,918
2201.8146	Fitness for Duty Program	Option 1	Hotel Load	1,379,366	-	1,379,366
2201.8147	Emergency Preparedness Program	Option 1	Hotel Load	1,640,343	-	1,640,343
2201.8148	Employee Safety Incentive Program	Option 1	Hotel Load	1,053,890	-	1,053,890
2201.8149	ES & H Safety Engineer	Option 1	Hotel Load	11,290,726	-	11,290,726
2201.8150	Field Office Supplies	Option 1	Hotel Load	5,499	-	5,499
2201.8820	Field Office Supplies	Option 1	Hotel Load	90,217	-	90,217
2202.8141	ES&H Program	Option 1	Hotel Load	1,232,710	-	1,232,710
2202.8143	Environmental Protection Program	Option 1	Hotel Load	949,660	-	949,660
2202.8145	Waste Management Program	Option 1	Hotel Load	693,898	-	693,898
2202.8147	Emergency Response Program	Option 1	Hotel Load	599,081	-	599,081
2202.8148	Employee Safety Incentive Program	Option 1	Hotel Load	177,741	-	177,741
2202.8149	ES & H Safety Engineer	Option 1	Hotel Load	2,101,834	-	2,101,834
2202.9504	Radiological Protection Early Start Up	Option 1	Hotel Load	15,591,116	-	15,591,116
Process Units - Hotel Load Subtotal				\$ 1,603,294,920	\$ 9,351,770	\$ 1,612,646,690
1000.8037	Mechanical – Construction Support	Option 1	MFFF Construction - Title III Engineering		\$ -	\$ -
1003.8032	Civil / Structural	Option 1	MFFF Construction - Title III Engineering	20,991,585	318,356	21,309,941
1003.8034	Electrical / I&C Site Construction Support	Option 1	MFFF Construction - Title III Engineering	26,236,366	-	26,236,366
1003.8035	Chemical-Construction Support	Option 1	MFFF Construction - Title III Engineering	7,654,227	-	7,654,227
1003.8036	Mechanical – Construction Support	Option 1	MFFF Construction - Title III Engineering	5,993,434	-	5,993,434
1003.8037	Plant Configuration Site Construction Support	Option 1	MFFF Construction - Title III Engineering	24,406,806	-	24,406,806
1003.8038	Engineering Mechanics - Site Construction Support	Option 1	MFFF Construction - Title III Engineering	1,889,064	-	1,889,064
1004.8040	Responsible Engineer Process Unit Fabrication Support	Option 1	MFFF Construction - Title III Engineering	0	-	-
1004.8044	Electrical / I&C Procurement and Fabrication Support	Option 1	MFFF Construction - Title III Engineering	2,589	-	2,589
1004.8046	Chemical-Procurement/Fabrication Support	Option 1	MFFF Construction - Title III Engineering	3,032,980	-	3,032,980
1004.8047	Mechanical – Procurement/Fabrication Support	Option 1	MFFF Construction - Title III Engineering	319,072	-	319,072
1005.8052	Mechanical – Startup & Operations Support	Option 1	MFFF Construction - Title III Engineering	300,099	-	300,099
1005.8053	Electrical / IC Startup and Operations Support	Option 1	MFFF Construction - Title III Engineering	-	-	-
1005.8054	Civil/ Structural Startup Support	Option 1	MFFF Construction - Title III Engineering	-	-	-
1005.8057	Chemical/Mechanical Engineering Startup Support	Option 1	MFFF Construction - Title III Engineering	120,575	-	120,575
1007.8071	Chemical Related Engineered Equipment	Option 1	MFFF Construction - Title III Engineering	-	-	-
1007.8072	Electrical Related Engineered Equipment	Option 1	MFFF Construction - Title III Engineering	-	-	-
1007.8073	Instrumentation & Control Related Engineered Equipment	Option 1	MFFF Construction - Title III Engineering	-	-	-
1007.8074	HVAC Related Engineered Equipment	Option 1	MFFF Construction - Title III Engineering	-	-	-
1007.8075	Miscellaneous Engineered Equipment	Option 1	MFFF Construction - Title III Engineering	-	-	-
MFFF Construction - Title III Engineering Subtotal				\$ 90,946,795	\$ 318,356	\$ 91,265,151
1721.2101	Site Preparation	Option 1	MFFF Construction - Installation/Materials	\$ 29,492,485	\$ -	\$ 29,492,485
1722.2201	Roads & Parking	Option 1	MFFF Construction - Installation/Materials	1,770,466	-	1,770,466
1722.2202	F" Road"	Option 1	MFFF Construction - Installation/Materials	3,767,924	-	3,767,924
1723.2301	Yard Structures	Option 1	MFFF Construction - Installation/Materials	3,861,339	-	3,861,339
1723.2501		Option 1	MFFF Construction - Installation/Materials	-	-	-
1724.2401	Underground Utilities	Option 1	MFFF Construction - Installation/Materials	21,315,647	-	21,315,647
1725.2501	Yard Fire Protection	Option 1	MFFF Construction - Installation/Materials	3,091,847	-	3,091,847
1726.2601	Chillers	Option 1	MFFF Construction - Installation/Materials	6,597,688	-	6,597,688
1727.2701	Site Security and Perimeter Intrusion Detection and Assessment System	Option 1	MFFF Construction - Installation/Materials	46,557,859	-	46,557,859
1728.2801	Yard Electrical & Lighting	Option 1	MFFF Construction - Installation/Materials	5,075,140	1,001,856	6,076,996
1729.2901	Landscaping	Option 1	MFFF Construction - Installation/Materials	334,321	-	334,321
1731.3150	Administration Building	Option 1	MFFF Construction - Installation/Materials	11,047,671	-	11,047,671
1732.3250	Receiving Warehouse Building	Option 1	MFFF Construction - Installation/Materials	1,257,230	-	1,257,230

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Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = [A]+[B]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
1732.3550	Standby Diesel Generator Building	Option 1	MFFF Construction - Installation/Materials		-	-
1733.3350	Secured Warehouse Building	Option 1	MFFF Construction - Installation/Materials	4,429,712	-	4,429,712
1734.3450	Tech Support & Access Control Building	Option 1	MFFF Construction - Installation/Materials	20,551,164	-	20,551,164
1735.3550	Standby Diesel Generator Building	Option 1	MFFF Construction - Installation/Materials		-	-
1735.3556	Standby Diesel Generator System/Equip.	Option 1	MFFF Construction - Installation/Materials		-	-
1736.3652	Civil / Structural / Architectural	Option 1	MFFF Construction - Installation/Materials	12,694,518	-	12,694,518
1736.3653	Mechanical / Piping	Option 1	MFFF Construction - Installation/Materials	5,079,259	602,200	5,681,459
1736.3654	Electrical	Option 1	MFFF Construction - Installation/Materials	12,245,457	-	12,245,457
1736.3655	I&C	Option 1	MFFF Construction - Installation/Materials	672,465	-	672,465
1736.3656	Emerg.Diesel Gen.System/Equipment	Option 1	MFFF Construction - Installation/Materials	10,397,689	270,645	10,668,334
1737.3751	Design	Option 1	MFFF Construction - Installation/Materials	3,061,059	-	3,061,059
1737.3752	Civil / Structural / Architectural	Option 1	MFFF Construction - Installation/Materials	2,335,417	-	2,335,417
1737.3753	Mechanical / Piping	Option 1	MFFF Construction - Installation/Materials	2,427,612	150,046	2,577,658
1737.3754	Electrical	Option 1	MFFF Construction - Installation/Materials	916,676	-	916,676
1737.3755	I&C	Option 1	MFFF Construction - Installation/Materials	58,855	-	58,855
1737.3756	Reagent Systems Equipment / Piping	Option 1	MFFF Construction - Installation/Materials	9,741,737	-	9,741,737
1741.4100	Building Structure	Option 1	MFFF Construction - Installation/Materials	48,980,823	-	48,980,823
1741.4110	Architectural Features	Option 1	MFFF Construction - Installation/Materials	12,573,673	-	12,573,673
1741.4120	HVAC	Option 1	MFFF Construction - Installation/Materials	25,031,783	11,344,628	36,376,411
1741.4130	MOX Processing Area (BMP) – MOX Processing Area – Level 1 – Fire Pro	Option 1	MFFF Construction - Installation/Materials	12,838,509	(139,560)	12,698,949
1741.4140	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	2,083,905	-	2,083,905
1741.4150	Process Piping	Option 1	MFFF Construction - Installation/Materials	17,941,478	-	17,941,478
1741.4170	Other Equipment	Option 1	MFFF Construction - Installation/Materials	6,319,621	775,159	7,094,780
1741.4180	Electrical	Option 1	MFFF Construction - Installation/Materials	39,253,457	7,957,015	47,210,472
1741.4190	Instrumentation	Option 1	MFFF Construction - Installation/Materials	2,263,956	470,592	2,734,549
1742.4200	Building Structure	Option 1	MFFF Construction - Installation/Materials	35,620,852	-	35,620,852
1742.4210	Architectural Features	Option 1	MFFF Construction - Installation/Materials	4,607,399	-	4,607,399
1742.4220	HVAC	Option 1	MFFF Construction - Installation/Materials	20,337,674	633,593	20,971,266
1742.4230	MOX Processing Area (BMP) – MOX Processing Area – Level 2 – Fire Pro	Option 1	MFFF Construction - Installation/Materials	14,509,257	87,277	14,596,534
1742.4240	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	42,641	-	42,641
1742.4250	Process Piping	Option 1	MFFF Construction - Installation/Materials	11,361,603	-	11,361,603
1742.4270	Other Equipment	Option 1	MFFF Construction - Installation/Materials	2,570,349	-	2,570,349
1742.4280	Electrical	Option 1	MFFF Construction - Installation/Materials	24,245,651	5,113,742	29,359,393
1742.4290	Instrumentation	Option 1	MFFF Construction - Installation/Materials	1,672,667	56,180	1,728,847
1742.4600	Fuel Assembly / Rods	Option 1	MFFF Construction - Installation/Materials		-	-
1743.4300	Building Structure	Option 1	MFFF Construction - Installation/Materials	28,748,394	-	28,748,394
1743.4310	Architectural Features	Option 1	MFFF Construction - Installation/Materials	5,178,527	-	5,178,527
1743.4320	HVAC	Option 1	MFFF Construction - Installation/Materials	33,868,139	2,375,012	36,243,152
1743.4330	MOX Processing Area (BMP) – MOX Processing Area – Level 3 – Fire Pro	Option 1	MFFF Construction - Installation/Materials	9,174,917	417,575	9,592,492
1743.4340	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	104,868	-	104,868
1743.4350	Process Piping	Option 1	MFFF Construction - Installation/Materials	14,276,183	-	14,276,183
1743.4370	Other Equipment	Option 1	MFFF Construction - Installation/Materials	1,178,593	-	1,178,593
1743.4380	Electrical	Option 1	MFFF Construction - Installation/Materials	29,108,526	4,472,321	33,580,847
1743.4390	Instrumentation	Option 1	MFFF Construction - Installation/Materials	13,578,892	6,099,305	19,678,197
1744.4400	Building Structure	Option 1	MFFF Construction - Installation/Materials	12,198,268	-	12,198,268
1744.4410	Architectural Features	Option 1	MFFF Construction - Installation/Materials		-	-
1744.4420	HVAC	Option 1	MFFF Construction - Installation/Materials	759,226	2,123,172	2,882,398
1744.4430	MOX Processing Area (BMP) – MOX Processing Area – Level 4 – Fire Pr	Option 1	MFFF Construction - Installation/Materials	83,530	-	83,530
1744.4440	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	610,698	-	610,698
1744.4480	Electrical	Option 1	MFFF Construction - Installation/Materials	946,936	-	946,936
1744.4490	Instrumentation	Option 1	MFFF Construction - Installation/Materials	52,684	-	52,684

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				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
1746.4600	Fuel Assembly / Rods	Option 1	MFFF Construction - Installation/Materials	4,513,528	-	4,513,528
1746.4610	Powder & Pellets	Option 1	MFFF Construction - Installation/Materials	13,852,934	-	13,852,934
1746.4620	Furnaces & Pellet Storage	Option 1	MFFF Construction - Installation/Materials	3,217,081	-	3,217,081
1746.4630	PuO2 Receiving, Storage & Decanning	Option 1	MFFF Construction - Installation/Materials	1,593,800	-	1,593,800
1746.4640	Labs & Testing	Option 1	MFFF Construction - Installation/Materials	35,673,183	-	35,673,183
1751.5100	Building Structure	Option 1	MFFF Construction - Installation/Materials	21,310,875	-	21,310,875
1751.5110	Architectural Features	Option 1	MFFF Construction - Installation/Materials	7,294,497	-	7,294,497
1751.5120	HVAC	Option 1	MFFF Construction - Installation/Materials	5,522,402	3,194,256	8,716,658
1751.5130	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 1 –	Option 1	MFFF Construction - Installation/Materials	1,687,871	113,711	1,801,582
1751.5140	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	1,928,426	5,000	1,933,426
1751.5150	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	61,479,927	1,793,787	63,273,713
1751.5170	Other Equipment	Option 1	MFFF Construction - Installation/Materials	1,833,068	173,825	2,006,893
1751.5180	Electrical	Option 1	MFFF Construction - Installation/Materials	14,788,145	2,413,665	17,201,810
1751.5190	Instrumentation	Option 1	MFFF Construction - Installation/Materials	776,284	-	776,284
1751.5250		Option 1	MFFF Construction - Installation/Materials	-	-	-
1751.5700		Option 1	MFFF Construction - Installation/Materials	-	-	-
1752.5200	Building Structure	Option 1	MFFF Construction - Installation/Materials	9,451,743	-	9,451,743
1752.5210	Architectural Features	Option 1	MFFF Construction - Installation/Materials	1,248,731	-	1,248,731
1752.5220	HVAC	Option 1	MFFF Construction - Installation/Materials	4,456,334	1,359,260	5,815,594
1752.5230	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 2 –	Option 1	MFFF Construction - Installation/Materials	1,448,562	32,491	1,481,053
1752.5240	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	668,407	-	668,407
1752.5250	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	99,621,681	3,765,933	103,387,615
1752.5270	Other Equipment	Option 1	MFFF Construction - Installation/Materials	451,468	-	451,468
1752.5280	Electrical	Option 1	MFFF Construction - Installation/Materials	12,371,164	1,869,083	14,240,247
1752.5290	Instrumentation	Option 1	MFFF Construction - Installation/Materials	923,769	56,180	979,949
1753.5300	Building Structure	Option 1	MFFF Construction - Installation/Materials	18,004,541	-	18,004,541
1753.5310	Architectural Features	Option 1	MFFF Construction - Installation/Materials	1,752,632	-	1,752,632
1753.5320	HVAC	Option 1	MFFF Construction - Installation/Materials	3,838,597	1,168,362	5,006,959
1753.5330	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 3 –	Option 1	MFFF Construction - Installation/Materials	1,739,718	110,733	1,850,451
1753.5340	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	240,601	-	240,601
1753.5350	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	14,785,971	342,275	15,128,246
1753.5370	Other Equipment	Option 1	MFFF Construction - Installation/Materials	729,933	-	729,933
1753.5380	Electrical	Option 1	MFFF Construction - Installation/Materials	13,771,405	2,622,067	16,393,472
1753.5390	Instrumentation	Option 1	MFFF Construction - Installation/Materials	1,333,837	56,180	1,390,017
1754.5400	Building Structure	Option 1	MFFF Construction - Installation/Materials	5,868,741	-	5,868,741
1754.5410	Architectural Features	Option 1	MFFF Construction - Installation/Materials	1,700,960	-	1,700,960
1754.5420	HVAC	Option 1	MFFF Construction - Installation/Materials	3,879,528	590,359	4,469,887
1754.5430	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 4 –	Option 1	MFFF Construction - Installation/Materials	2,011,049	132,878	2,143,927
1754.5440	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	1,118,479	245,523	1,364,002
1754.5450	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	15,726,421	174,744	15,901,164
1754.5470	Other Equipment	Option 1	MFFF Construction - Installation/Materials	503,476	-	503,476
1754.5480	Electrical	Option 1	MFFF Construction - Installation/Materials	14,137,204	2,078,460	16,215,664
1754.5490	Instrumentation	Option 1	MFFF Construction - Installation/Materials	814,419	-	814,419
1754.5540	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	-	-	-
1755.5500	Building Structure	Option 1	MFFF Construction - Installation/Materials	10,560,583	-	10,560,583
1755.5510	Architectural Features	Option 1	MFFF Construction - Installation/Materials	2,112,694	-	2,112,694
1755.5520	HVAC	Option 1	MFFF Construction - Installation/Materials	6,266,659	3,172,482	9,439,141
1755.5530	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 5 –	Option 1	MFFF Construction - Installation/Materials	1,232,949	157,060	1,390,009
1755.5540	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	1,990,878	51,150	2,042,028
1755.5550	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	9,410,822	252,872	9,663,694
1755.5570	Other Equipment	Option 1	MFFF Construction - Installation/Materials	213,102	-	213,102

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Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = [A]+[B]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
1755.5580	Electrical	Option 1	MFFF Construction - Installation/Materials	12,921,965	439,431	13,361,396
1755.5590	Instrumentation	Option 1	MFFF Construction - Installation/Materials	9,345,235	6,092,808	15,438,044
1756.5600	Building Structure	Option 1	MFFF Construction - Installation/Materials	5,340,300	-	5,340,300
1756.5670	Other Equipment	Option 1	MFFF Construction - Installation/Materials	-	-	-
1756.5680	Electrical	Option 1	MFFF Construction - Installation/Materials	187,169	-	187,169
1756.5690	Instrumentation	Option 1	MFFF Construction - Installation/Materials	10,436	-	10,436
1757.5730	PAF	Option 1	MFFF Construction - Installation/Materials	35,808	-	35,808
1758.5810	Mechanical Systems	Option 1	MFFF Construction - Installation/Materials	11,156,856	-	11,156,856
1758.5850	Chemical Systems	Option 1	MFFF Construction - Installation/Materials	7,082,040	-	7,082,040
1761.6100	Building Structure	Option 1	MFFF Construction - Installation/Materials	21,483,846	-	21,483,846
1761.6110	Architectural Features	Option 1	MFFF Construction - Installation/Materials	4,960,379	-	4,960,379
1761.6120	HVAC	Option 1	MFFF Construction - Installation/Materials	4,498,783	(134,161)	4,364,621
1761.6130	Shipping and Receiving Area (BSR) – Shipping and Receiving Area – Le	Option 1	MFFF Construction - Installation/Materials	1,325,576	117,757	1,443,333
1761.6140	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	948,598	-	948,598
1761.6150	Process Piping	Option 1	MFFF Construction - Installation/Materials	1,199,682	-	1,199,682
1761.6170	Other Equipment	Option 1	MFFF Construction - Installation/Materials	312,752	45,698	358,450
1761.6180	Electrical	Option 1	MFFF Construction - Installation/Materials	8,043,706	1,032,629	9,076,335
1761.6190	Instrumentation	Option 1	MFFF Construction - Installation/Materials	659,455	434,053	1,093,509
1762.6200	Building Structure	Option 1	MFFF Construction - Installation/Materials	11,030,640	-	11,030,640
1762.6210	Architectural Features	Option 1	MFFF Construction - Installation/Materials	808,993	-	808,993
1762.6220	HVAC	Option 1	MFFF Construction - Installation/Materials	8,200,057	(324,143)	7,875,915
1762.6230	Shipping and Receiving Area (BSR) – Shipping and Receiving Area – Le	Option 1	MFFF Construction - Installation/Materials	1,082,082	366,313	1,448,395
1762.6240	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	20,100	-	20,100
1762.6250	Process Piping	Option 1	MFFF Construction - Installation/Materials	311,367	-	311,367
1762.6270	Other Equipment	Option 1	MFFF Construction - Installation/Materials	34,875	-	34,875
1762.6280	Electrical	Option 1	MFFF Construction - Installation/Materials	4,865,978	470,823	5,336,801
1762.6290	Instrumentation	Option 1	MFFF Construction - Installation/Materials	334,483	-	334,483
1763.6300	Building Structure	Option 1	MFFF Construction - Installation/Materials	5,600,636	-	5,600,636
1763.6310	Architectural Features	Option 1	MFFF Construction - Installation/Materials	1,669,516	-	1,669,516
1763.6320	HVAC	Option 1	MFFF Construction - Installation/Materials	6,681,357	886,643	7,568,000
1763.6330	Shipping and Receiving Area (BSR) – Shipping and Receiving Area – Le	Option 1	MFFF Construction - Installation/Materials	1,476,182	183,030	1,659,212
1763.6340	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	58,334	-	58,334
1763.6350	Process Piping	Option 1	MFFF Construction - Installation/Materials	863,815	-	863,815
1763.6370	Other Equipment	Option 1	MFFF Construction - Installation/Materials	105,520	-	105,520
1763.6380	Electrical	Option 1	MFFF Construction - Installation/Materials	8,353,116	377,760	8,730,876
1763.6390	Instrumentation	Option 1	MFFF Construction - Installation/Materials	1,401,368	377,873	1,779,241
1764.6400	Building Structure	Option 1	MFFF Construction - Installation/Materials	3,072,441	-	3,072,441
1764.6470	Other Equipment	Option 1	MFFF Construction - Installation/Materials	-	-	-
1764.6480	Electrical	Option 1	MFFF Construction - Installation/Materials	186,341	-	186,341
1764.6490	Instrumentation	Option 1	MFFF Construction - Installation/Materials	10,457	-	10,457
1771.7100	Building Structure	Option 1	MFFF Construction - Installation/Materials	8,425,791	-	8,425,791
1771.7110	Architectural Features	Option 1	MFFF Construction - Installation/Materials	1,420,056	-	1,420,056
1771.7120	HVAC	Option 1	MFFF Construction - Installation/Materials	4,046,041	313,711	4,359,752
1771.7130	Fire Protection	Option 1	MFFF Construction - Installation/Materials	-	-	-
1771.7140	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	35,057	-	35,057
1771.7170	Other Equipment	Option 1	MFFF Construction - Installation/Materials	-	-	-
1771.7180	Electrical	Option 1	MFFF Construction - Installation/Materials	1,542,408	139,719	1,682,127
1771.7190	Instrumentation	Option 1	MFFF Construction - Installation/Materials	86,625	-	86,625
1772.7200	Building Structure	Option 1	MFFF Construction - Installation/Materials	39,222,116	-	39,222,116
1772.7210	Architectural Features	Option 1	MFFF Construction - Installation/Materials	31,026,898	-	31,026,898
1772.7270	Other Equipment	Option 1	MFFF Construction - Installation/Materials	113,238	-	113,238

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Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = [A]+[B]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
1772.7280	Electrical	Option 1	MFFF Construction - Installation/Materials	1,091,331	-	1,091,331
1774.7401	Subcontractor Project Management/Project Controls	Option 1	MFFF Construction - Installation/Materials	72,846,805	-	72,846,805
1774.7402	Subcontractor Project Administration/Accounting	Option 1	MFFF Construction - Installation/Materials	-	-	-
1774.7403	Subcontractor Quality Assurance / Quality Control	Option 1	MFFF Construction - Installation/Materials	-	-	-
1774.7404	Subcontractor Environmental, Safety and Health	Option 1	MFFF Construction - Installation/Materials	3	-	3
1774.7405	Subcontractor Home Office Support	Option 1	MFFF Construction - Installation/Materials	-	-	-
1774.7406	Subcontractor Mobilization	Option 1	MFFF Construction - Installation/Materials	859,829	-	859,829
1774.7407	Subcontractor Demobilization	Option 1	MFFF Construction - Installation/Materials	580,131	-	580,131
1774.7408	Dewatering, Erosion and Sedimentation Control	Option 1	MFFF Construction - Installation/Materials	176,470	-	176,470
1774.7409	Equipment Rental (Including Vehicles)	Option 1	MFFF Construction - Installation/Materials	20,944,738	-	20,944,738
1774.7410	Miscellaneous Procured Services	Option 1	MFFF Construction - Installation/Materials	1,447,138	-	1,447,138
1774.7411	Consumables and Expendable Materials	Option 1	MFFF Construction - Installation/Materials	4,263,877	-	4,263,877
1774.7412	Performance Bond	Option 1	MFFF Construction - Installation/Materials	1,107,034	-	1,107,034
1774.7413	Tools	Option 1	MFFF Construction - Installation/Materials	387,367	-	387,367
1774.7414	Craft Distributable and Indirect Costs	Option 1	MFFF Construction - Installation/Materials	14,124,171	-	14,124,171
1774.7415	Concrete Batch Plant	Option 1	MFFF Construction - Installation/Materials	3,778,185	-	3,778,185
1774.7416	Independent Test Lab	Option 1	MFFF Construction - Installation/Materials	1,887,424	-	1,887,424
1774.7417	NDE Testing	Option 1	MFFF Construction - Installation/Materials	904,226	-	904,226
1774.7418	Craft Support for MFFF Construction	Option 1	MFFF Construction - Installation/Materials	23,870,675	-	23,870,675
1774.7419	Construction Distributables - Misc	Option 1	MFFF Construction - Installation/Materials	44,517,380	-	44,517,380
1774.7420	Bulk Cable for MFFF Construction	Option 1	MFFF Construction - Installation/Materials	33,574,419	2,935,805	36,510,224
1774.7421	Electrical Connectors for MFFF Construction	Option 1	MFFF Construction - Installation/Materials	-	-	-
1774.7422	Electric Glove Box Penetrations for MFFF Construction	Option 1	MFFF Construction - Installation/Materials	-	-	-
1774.7424	Distributables - Bulk Commodity - HVAC	Option 1	MFFF Construction - Installation/Materials	17,899,674	(354,319)	17,545,355
1774.7427	Rebar MFFF Construction	Option 1	MFFF Construction - Installation/Materials	59,420	-	59,420
1774.7428	Civil/Structural Material	Option 1	MFFF Construction - Installation/Materials	44,341,502	-	44,341,502
1774.7429	Distributables - Bulk Commodity - Stainless Steel Ball Valve	Option 1	MFFF Construction - Installation/Materials	15,484,886	1,603,495	17,088,381
1774.7430	Distributable - Bulk Commodity Account - Chiller	Option 1	MFFF Construction - Installation/Materials	2,321,091	-	2,321,091
1774.7431	Bulk Commodity - Fans	Option 1	MFFF Construction - Installation/Materials	-	-	-
1774.7432	Electrical Material and Other Miscellaneous Labor Acc	Option 1	MFFF Construction - Installation/Materials	65,065,750	16,741,316	81,807,066
1774.7433	Instrumentation & Controls Material	Option 1	MFFF Construction - Installation/Materials	75,731,379	(1,923,606)	73,807,772
1774.7434	Chemical Equipment	Option 1	MFFF Construction - Installation/Materials	9,611,090	294,652	9,905,742
1774.7435	Distributables - HVAC Equipment	Option 1	MFFF Construction - Installation/Materials	70,185,312	21,945,835	92,131,147
1774.7436	Suspense Account - Process Equipment	Option 1	MFFF Construction - Installation/Materials	36,697	-	36,697
1774.7438	Mechanical Equipment	Option 1	MFFF Construction - Installation/Materials	106,192,202	37,750,262	143,942,463
1774.7439	Consumable & Expendable Materials Specific to CP-27 - BAP Chemical F	Option 1	MFFF Construction - Installation/Materials	17,061,498	20,717,334	37,778,832
1774.7440	Support Building for the Fabrication of Supports on Site Specific tc	Option 1	MFFF Construction - Installation/Materials	16,627,962	22,739,001	39,366,963
1774.7441	BRP Distributables	Option 1	MFFF Construction - Installation/Materials	481,143	-	481,143
1774.7442	Craft Labor for Non-Discipline Specific Scope	Option 1	MFFF Construction - Installation/Materials	7,070,939	-	7,070,939
1774.7445	Craft Orientation & Training	Option 1	MFFF Construction - Installation/Materials	1,205,167	1,908,070	3,113,237
1774.7446	MOX Construction Back Charges	Option 1	MFFF Construction - Installation/Materials	-	-	-
1774.7453	Craft Orientation & Training	Option 1	MFFF Construction - Installation/Materials	125,868	-	125,868
1774.7454	Bulk Procurement - Material	Option 1	MFFF Construction - Installation/Materials	408,080	(154,104)	253,976
1774.7455	Distributable - Subcontract	Option 1	MFFF Construction - Installation/Materials	285,974	464,411	750,385
1775.7501	Batch Plant Capital Cost	Option 1	MFFF Construction - Installation/Materials	0	-	-
1775.7502	Batch Plant Operations	Option 1	MFFF Construction - Installation/Materials	0	-	0
1775.7503	Batch Plant Concrete Materials	Option 1	MFFF Construction - Installation/Materials	0	-	(0)
MFFF Construction - Installation/Materials Subtotal				\$ 1,998,919,307	\$ 205,231,191	\$ 2,204,150,497
1500.8501	Management / Admin	Option 1	Construction Management	\$ 63,202,558	\$ -	\$ 63,202,558
1500.8502	Project Controls	Option 1	Construction Management	32,745,008	-	32,745,008

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Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = [A]+[B]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
1500.8503	Quality Assurance	Option 1	Construction Management	484,283	-	484,283
1500.8504	ES&H	Option 1	Construction Management	694,576	-	694,576
1500.8506	Business	Option 1	Construction Management	4,061,850	-	4,061,850
1501.8511	Business Travel	Option 1	Construction Management	494,312	-	494,312
1501.8512	Temporary Assignments	Option 1	Construction Management	1,802,546	-	1,802,546
1501.8519	Project Controls	Option 1	Construction Management	-	-	-
1502.8521	Supervision / Admin	Option 1	Construction Management	-	-	-
1502.8522	Project Controls	Option 1	Construction Management	-	-	-
1502.8523	Quality Assurance	Option 1	Construction Management	-	-	-
1502.8524	ES&H	Option 1	Construction Management	-	-	-
1503.8531	Supervision / Admin	Option 1	Construction Management	-	-	-
1503.8532	Project Controls	Option 1	Construction Management	-	-	-
1503.8534	ES&H	Option 1	Construction Management	-	-	-
1504.8512	Temporary Assignments	Option 1	Construction Management	1,858	-	1,858
1504.8541	Supervision / Admin	Option 1	Construction Management	103,593,854	4,043,003	107,636,857
1504.8542	Work Control Group	Option 1	Construction Management	-	-	-
1505.8551	Supervision / Admin	Option 1	Construction Management	3,461,412	-	3,461,412
1505.8552	Project Controls	Option 1	Construction Management	-	-	-
1505.8554	ES&H	Option 1	Construction Management	-	-	-
Construction Management Subtotal				\$ 210,542,258	\$ 4,043,003	\$ 214,585,261
1901.6017	Human Performance Improvement Program	Option 1	QA	\$ 162,906	\$ -	\$ 162,906
1901.6018	QA/QC - JLE/LTTA	Option 1	QA	-	-	-
1901.6020	QA Program Management & Administration	Option 1	QA	12,989,851	-	12,989,851
1901.6021	Quality Engineering	Option 1	QA	24,010,181	-	24,010,181
1901.6022	Audit & Surveillance	Option 1	QA	13,036,397	-	13,036,397
1901.6023	Quality Control Projects	Option 1	QA	76,076,877	2,869,622	78,946,499
1901.6024	QA & QC Assembly GS	Option 1	QA	4,392,446	-	4,392,446
1901.6025	MOX Potential Back Charges	Option 1	QA	399	-	399
1901.6026	QA/QC Subcontractors	Option 1	QA	256,791	-	256,791
1901.6027	Testing & Inspection QA/QC	Option 1	QA	22,121,449	-	22,121,449
1901.6028	Commercial Grade Dedication	Option 1	QA	54,273	-	54,273
1901.6029	Regulatory Compliance	Option 1	QA	5,147,845	-	5,147,845
1901.9003	Quality Engineering	Option 1	QA	-	-	-
1901.9503	Quality Engineering	Option 1	QA	-	-	-
1902.6017	Human Performance Improvement Program	Option 1	QA	10,204	-	10,204
1902.6020	QA Program Management & Administration	Option 1	QA	1,809,790	-	1,809,790
1902.6021	Quality Engineering	Option 1	QA	1,277,372	-	1,277,372
1902.6022	Audit & Surveillance	Option 1	QA	1,270,862	-	1,270,862
1902.6023	Quality Control Projects	Option 1	QA	2,036,800	-	2,036,800
1902.6026	QA/QC Subcontractors	Option 1	QA	22,215	-	22,215
1902.6027	Testing & Inspection QA/QC	Option 1	QA	349,467	-	349,467
1902.6029	Regulatory Compliance	Option 1	QA	983,821	-	983,821
1902.9503	Quality Engineering	Option 1	QA	-	-	-
Quality Assurance Subtotal				\$ 166,009,946	\$ 2,869,622	\$ 168,879,568
0601.6001	Communications	Option 1	Not Claimed- All Other	\$ -	-	\$ -
0601.6009	Relocations	Option 1	Not Claimed- All Other	-	-	-
0602.6010	Project Controls	Option 1	Not Claimed- All Other	-	-	-
0604.6032	Training	Option 1	Not Claimed- All Other	-	-	-
0604.6036	Accounting, Treasury & Invoice Operations	Option 1	Not Claimed- All Other	-	-	-

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Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = [A]+[B]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
0604.6038	Facility Management	Option 1	Not Claimed- All Other		-	-
0604.6042	PERC\$	Option 1	Not Claimed- All Other		-	-
0604.6047	Legal Expenses	Option 1	Not Claimed- All Other		-	-
0606.6057	Engineered Equipment Group	Option 1	Not Claimed- All Other		-	-
0607.6060	IT Support	Option 1	Not Claimed- All Other		-	-
0607.6061	IT Other Direct Costs (ODCs)	Option 1	Not Claimed- All Other		-	-
0611.6001	Communications	Option 1	Not Claimed- All Other		-	-
0611.6090	Project Systems Assessment - NNSA (OPC)	Option 1	Not Claimed- All Other		-	-
0614.6033	Materials Management	Option 1	Not Claimed- All Other		-	-
1000.8005	Document Management	Option 1	Not Claimed- All Other	450,677	-	450,677
1000.8006	Engineering Training	Option 1	Not Claimed- All Other	1,124,889	-	1,124,889
1001.8011	Business Travel	Option 1	Not Claimed- All Other	334,582	-	334,582
1001.8012	Temporary Assignments	Option 1	Not Claimed- All Other		-	-
1001.8019	Other ODCs	Option 1	Not Claimed- All Other	792,740	-	792,740
1002.8022	Chemical	Option 1	Not Claimed- All Other	620,664	-	620,664
1002.8023	Mechanical	Option 1	Not Claimed- All Other	93,201	-	93,201
1002.8024	Laboratory	Option 1	Not Claimed- All Other	63,836	-	63,836
1002.8026	Safety	Option 1	Not Claimed- All Other	79,743	-	79,743
1002.8027	Reference Plant Support	Option 1	Not Claimed- All Other	28,220	-	28,220
1003.8031	Supervision / Admin	Option 1	Not Claimed- All Other	1,000,816	-	1,000,816
1003.8038	Engineering Mechanics - Site Construction Support	Option 1	Not Claimed- All Other		-	-
1004.8046	Chemical-Procurement/Fabrication Support	Option 1	Not Claimed- All Other		-	-
1004.8048	Plant Configuration - Construction, Procurement & Fabrication Support	Option 1	Not Claimed- All Other		-	-
1004.8049	Equipment Qualification	Option 1	Not Claimed- All Other	426,083	-	426,083
1005.8051	Supervision / Admin	Option 1	Not Claimed- All Other	141,465	-	141,465
1005.8059	Plant Configuration	Option 1	Not Claimed- All Other		-	-
1100.8101	Management / Administration	Option 1	Not Claimed- All Other	210,215	-	210,215
1100.8102	NSA Project Controls	Option 1	Not Claimed- All Other	94,764	-	94,764
1101.8111	Business Travel	Option 1	Not Claimed- All Other	87,121	-	87,121
1101.8119	Other ODCs (Legal & S/C Costs)	Option 1	Not Claimed- All Other	896,882	-	896,882
1102.8122	Compliance Program	Option 1	Not Claimed- All Other	912,882	-	912,882
1103.8132	Chemical Safety Support	Option 1	Not Claimed- All Other	2,050,513	-	2,050,513
1103.8133	Laboratory Support	Option 1	Not Claimed- All Other	1,228,793	-	1,228,793
1104.8151	Criticality Safety Procurement & Cons	Option 1	Not Claimed- All Other		-	-
1105.8151	Criticality Safety Procurement & Const Support	Option 1	Not Claimed- All Other	3,169,473	-	3,169,473
1105.8152	Criticality Safety Startup Support	Option 1	Not Claimed- All Other	1,434,865	-	1,434,865
1105.8153	Criticality Safety Licensing Support	Option 1	Not Claimed- All Other	2,046,062	-	2,046,062
1105.8154	Nuclear Radiation Protections	Option 1	Not Claimed- All Other	2,737,319	-	2,737,319
1105.8155	Nuclear Radiation & Criticality Monitoring	Option 1	Not Claimed- All Other	594,766	-	594,766
1105.8156	Emerg. Planning & Deactivation Design Spt.	Option 1	Not Claimed- All Other	143,133	-	143,133
1106.8116	Integrated Safety Analysis	Option 1	Not Claimed- All Other		-	-
1106.8161	Defense of the Safety Basis	Option 1	Not Claimed- All Other	2,663,143	-	2,663,143
1106.8162	ISA Review of Design/Construction Modification	Option 1	Not Claimed- All Other	2,831,117	-	2,831,117
1106.8164	Update the Safety Basis	Option 1	Not Claimed- All Other	3,584,413	-	3,584,413
1106.8165	Support Update of the ISA Summary	Option 1	Not Claimed- All Other	1,211,164	-	1,211,164
1109.8192	Physical Security Program	Option 1	Not Claimed- All Other	2,940,859	-	2,940,859
1109.8193	Material Control & Accountability Program	Option 1	Not Claimed- All Other	1,597,569	-	1,597,569
1109.8195	DOE/WSRC Costs	Option 1	Not Claimed- All Other		-	-
1757.5700	AP Chemical Units	Option 1	Not Claimed- All Other		-	-
1757.5720	AP Mechanical Units	Option 1	Not Claimed- All Other		-	-
2000.9001	Management / Administration	Option 1	Not Claimed- All Other		-	-

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Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = [A]+[B]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
2000.9002	Project Controls	Option 1	Not Claimed- All Other		-	-
2000.9003	Quality Assurance	Option 1	Not Claimed- All Other		-	-
2000.9004	Environment, Safety & Health	Option 1	Not Claimed- All Other		-	-
2001.9011	Business Travel	Option 1	Not Claimed- All Other	1,049,346	-	1,049,346
2001.9012	Temporary Assignments	Option 1	Not Claimed- All Other	71,116	-	71,116
2001.9014	Test Equipment & Consumables	Option 1	Not Claimed- All Other	1,927,294	-	1,927,294
2001.9017	Spare Parts	Option 1	Not Claimed- All Other	385,458	-	385,458
2002.9021	Generic Test Documents	Option 1	Not Claimed- All Other	1,500,169	-	1,500,169
2002.9022	Validation Plans	Option 1	Not Claimed- All Other	1,059,587	-	1,059,587
2002.9023	General Test Programs	Option 1	Not Claimed- All Other	2,380,380	-	2,380,380
2002.9024	Technical Support	Option 1	Not Claimed- All Other	2,488,803	-	2,488,803
2002.9026	Cold Startup Training	Option 1	Not Claimed- All Other	155,818	-	155,818
2002.9527	Generic Test Documents	Option 1	Not Claimed- All Other		-	-
2003.9011	Generic Test Documents	Option 1	Not Claimed- All Other		-	-
2003.9031	In-Advance Tests in U.S.	Option 1	Not Claimed- All Other	8,577,404	-	8,577,404
2003.9032	In-Advance Tests in Europe	Option 1	Not Claimed- All Other	2,238,999	-	2,238,999
2004.9041	Aqueous Polishing	Option 1	Not Claimed- All Other	17,121,299	-	17,121,299
2004.9042	MOX Process	Option 1	Not Claimed- All Other	21,675,945	-	21,675,945
2004.9043	Balance of Plant	Option 1	Not Claimed- All Other	15,238,873	-	15,238,873
2004.9044	Reaction to General Incident (RGI)	Option 1	Not Claimed- All Other	2,529,087	-	2,529,087
2004.9047	Turnover & Logistics	Option 1	Not Claimed- All Other		-	-
2004.9048	Laboratory - IPT	Option 1	Not Claimed- All Other	8,094,707	-	8,094,707
2004.9049	Process Control - IPT	Option 1	Not Claimed- All Other	7,939,498	-	7,939,498
2005.9051	SU In-Advance Tests Rework and Modifications in US	Option 1	Not Claimed- All Other	176,629	-	176,629
2007.9071	MOX IPT Rework	Option 1	Not Claimed- All Other	34,495,693	-	34,495,693
2010.9101	Management / Administration - IPT	Option 1	Not Claimed- All Other		-	-
2010.9102	Project Controls - IPT	Option 1	Not Claimed- All Other		-	-
2011.9111	Business Travel - IPT	Option 1	Not Claimed- All Other	310,955	-	310,955
2011.9112	Generic Test Documents	Option 1	Not Claimed- All Other		-	-
2011.9114	Test Equipment & Consumables - IPT	Option 1	Not Claimed- All Other	11,050,555	-	11,050,555
2011.9117	Spare Parts - IPT	Option 1	Not Claimed- All Other		-	-
2012.9124	Technical Support - IPT	Option 1	Not Claimed- All Other	168,776	-	168,776
2012.9126	Cold Startup Training - IPT	Option 1	Not Claimed- All Other		-	-
2201.8138	Relocation	Option 1	Not Claimed- All Other		-	-
2201.8139	Field Office Supplies	Option 1	Not Claimed- All Other		-	-
2201.8141	ES&H Program	Option 1	Not Claimed- All Other		-	-
2201.8143	Environmental Protection Program	Option 1	Not Claimed- All Other		-	-
2201.8144	Industrial Safety Program	Option 1	Not Claimed- All Other		-	-
2201.8145	Waste Management Program	Option 1	Not Claimed- All Other		-	-
2201.8146	Fitness for Duty Program	Option 1	Not Claimed- All Other		-	-
2201.8147	Emergency Preparedness Program	Option 1	Not Claimed- All Other		-	-
2201.8148	Employee Safety Incentive Program	Option 1	Not Claimed- All Other		-	-
2201.8149	ES & H Safety Engineer	Option 1	Not Claimed- All Other		-	-
2201.8820	Field Office Supplies	Option 1	Not Claimed- All Other		-	-
2201.9004	Field Office Supplies	Option 1	Not Claimed- All Other		-	-
2201.9504	Field Office Supplies	Option 1	Not Claimed- All Other		-	-
2201.9506	Field Office Supplies	Option 1	Not Claimed- All Other		-	-
2202.8139	Field Office Supplies	Option 1	Not Claimed- All Other		-	-
2202.8145	Waste Management Program	Option 1	Not Claimed- All Other		-	-
2202.9004	Field Office Supplies	Option 1	Not Claimed- All Other		-	-
2202.9506	Field Office Supplies	Option 1	Not Claimed- All Other		-	-

CB&I AREVA MOX Services, LLC.
MFFF 2012 Rebaseline with Addendum Project Cost by Cost Account

Schedule 6.2

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = [A]+[B]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
9008.0901	DOE Annual Costs for the SRS M&O Support to MOX fo all Infrastructur	Option 1	Not Claimed- All Other	65,437,317	-	65,437,317
9009.0901	DOE/WSRC Support	Option 1	Not Claimed- All Other	-	-	-
9009.0902	DOE Annual Costs for the SRS M&O Support to MOX for Infrastructure S	Option 1	Not Claimed- All Other	56,179,840	-	56,179,840
9009.0903	DOE Tech Spt. (Non-MOX Services Cost)	Option 1	Not Claimed- All Other	115,039,367	547,917	115,587,284
All Other Subtotal				\$ 412,884,884	\$ 547,917	\$ 413,432,801
Option 1 Subtotal				\$ 5,287,915,260	\$ 275,836,121	\$ 5,563,751,381
0110.5101	NRC Costs - MFFF	Base	Not Claimed- Base Contract	\$ 12,646,529	\$ -	\$ 12,646,529
0110.5301	Environmental Report	Base	Not Claimed- Base Contract	1,822,489	-	1,822,489
0110.5302	Electrolyzer Testing	Base	Not Claimed- Base Contract	268,684	-	268,684
0110.5303	ORNL Gallium Testing	Base	Not Claimed- Base Contract	100,000	-	100,000
0110.5304	ORNL Criticality Review	Base	Not Claimed- Base Contract	150,000	-	150,000
0110.5305	Clemson University Research	Base	Not Claimed- Base Contract	1,421,977	-	1,421,977
0110.5306	Develpment & Test Programs	Base	Not Claimed- Base Contract	2,111,621	-	2,111,621
0110.5307	Site Develop./Infrast. Improvement OPC Work	Base	Not Claimed- Base Contract	496,340	-	496,340
0110.5308	SCE Scanner Testing	Base	Not Claimed- Base Contract	511,780	-	511,780
0110.5401	MFFF Operations Planning	Base	Not Claimed- Base Contract	(84,994)	-	(84,994)
0110.5402	Safety & Systems Integration	Base	Not Claimed- Base Contract	210,415	-	210,415
0110.5411	Licensing	Base	Not Claimed- Base Contract	5,107,144	-	5,107,144
0110.5421	Engineering Support to Licensing - PDG	Base	Not Claimed- Base Contract	98,149	-	98,149
0110.5422	Engineering Support to Licensing - FDG	Base	Not Claimed- Base Contract	121,379	-	121,379
0110.5423	Engine+B1001ering Support to Licensing - C/S	Base	Not Claimed- Base Contract	116,292	-	116,292
0110.5424	Eng. Support to Lic. - Mech.Prog.	Base	Not Claimed- Base Contract	283,621	-	283,621
0110.5425	Eng. Support to Lic. - Elect/ I&C/S&S/MC&A	Base	Not Claimed- Base Contract	25,078	-	25,078
0110.5427	Engr Support to Lic - Nuclear Safety	Base	Not Claimed- Base Contract	4,823,621	-	4,823,621
0110.5428	MFFF Environmental / Permitting	Base	Not Claimed- Base Contract	320,086	-	320,086
0110.5431	Facility Security Vulnerability Assessmen	Base	Not Claimed- Base Contract	181,482	-	181,482
0110.5432	Facility Licensing Plans	Base	Not Claimed- Base Contract	2,305,639	-	2,305,639
0110.5450	Miscellaneous Studies	Base	Not Claimed- Base Contract	970,612	-	970,612
0110.5451	Coord. & Oversight of CETL Research Projects	Base	Not Claimed- Base Contract	285,972	-	285,972
0110.5452	CAB Change Phase II Scoping & Devel	Base	Not Claimed- Base Contract	180,858	-	180,858
0110.5453	Monitoring & Inspection Impacts Study	Base	Not Claimed- Base Contract	30,935	-	30,935
0110.5454	CAB Phase II	Base	Not Claimed- Base Contract	3,875	-	3,875
0110.5455	Maximize the use of MFFF Study	Base	Not Claimed- Base Contract	104,822	-	104,822
0110.5499	Control Area Boundary Change Scoping	Base	Not Claimed- Base Contract	731,640	-	731,640
0110.5601	DNFSB	Base	Not Claimed- Base Contract	60	-	60
0111.1101	General	Base	Not Claimed- Base Contract	4,800,117	-	4,800,117
0111.1102	Mobilization, De-Mob, & Close-out	Base	Not Claimed- Base Contract	899,521	-	899,521
0111.1103	Management	Base	Not Claimed- Base Contract	5,945,756	-	5,945,756
0111.1104	Administrative	Base	Not Claimed- Base Contract	2,667,640	-	2,667,640
0111.1105	Support Services	Base	Not Claimed- Base Contract	5,107,135	-	5,107,135
0111.1106	Miscellaneous	Base	Not Claimed- Base Contract	737,690	-	737,690
0111.1107	General Expenses	Base	Not Claimed- Base Contract	14,553,159	-	14,553,159
0111.1108	Procedure Development	Base	Not Claimed- Base Contract	29	-	29
0112.8301	MDG Base Contract (Pre FY 2003)	Base	Not Claimed- Base Contract	5,049,539	-	5,049,539
0113.1301	General	Base	Not Claimed- Base Contract	16,151,645	-	16,151,645
0113.1302	Receiving	Base	Not Claimed- Base Contract	814,098	-	814,098
0113.1303	Powder	Base	Not Claimed- Base Contract	2,927,651	-	2,927,651
0113.1304	Pellets	Base	Not Claimed- Base Contract	2,066,298	-	2,066,298
0113.1305	Cladding	Base	Not Claimed- Base Contract	1,415,796	-	1,415,796

CB&I AREVA MOX Services, LLC.
MFFF 2012 Rebaseline with Addendum Project Cost by Cost Account

Schedule 6.2

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = [A]+[B]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
0113.1306	Assembling	Base	Not Claimed- Base Contract	967,433	-	967,433
0113.1307	Laboratory	Base	Not Claimed- Base Contract	557,757	-	557,757
0113.1308	Samples Pneumatic Transfer	Base	Not Claimed- Base Contract	191,097	-	191,097
0113.1309	Waste Management	Base	Not Claimed- Base Contract	436,733	-	436,733
0113.1310	Material Control & Accountability	Base	Not Claimed- Base Contract	325,534	-	325,534
0113.1311	Process Control	Base	Not Claimed- Base Contract	422,672	-	422,672
0113.1312	Integrated Safety Analysis	Base	Not Claimed- Base Contract	5,080,631	-	5,080,631
0113.1313	Facility Input	Base	Not Claimed- Base Contract	819,425	-	819,425
0113.1399	PDG MOX Process Unplanned Work	Base	Not Claimed- Base Contract	363,641	-	363,641
0114.1401	General	Base	Not Claimed- Base Contract	4,943,475	-	4,943,475
0114.1402	Dissolution	Base	Not Claimed- Base Contract	4,396,665	-	4,396,665
0114.1403	Purification	Base	Not Claimed- Base Contract	3,989,262	-	3,989,262
0114.1404	Conversion	Base	Not Claimed- Base Contract	1,662,388	-	1,662,388
0114.1405	Facility Input	Base	Not Claimed- Base Contract	3,073,636	-	3,073,636
0114.1406	Safety	Base	Not Claimed- Base Contract	7,785,239	-	7,785,239
0115.1501	General	Base	Not Claimed- Base Contract	13,628,548	-	13,628,548
0115.1502	Buildings, Structures & Yard	Base	Not Claimed- Base Contract	37,399,208	-	37,399,208
0115.1503	Deliverables	Base	Not Claimed- Base Contract	20,283	-	20,283
0115.1504	Mechanical Programs	Base	Not Claimed- Base Contract	66,178,370	1,081,891	67,260,261
0115.1505	Electrical Programs	Base	Not Claimed- Base Contract	917,015	-	917,015
0115.1506	Nuclear Safety Programs	Base	Not Claimed- Base Contract	14,413,675	-	14,413,675
0115.1507	Mechanical Systems & Components	Base	Not Claimed- Base Contract	28,782,999	-	28,782,999
0115.1508	Electrical Systems & Components	Base	Not Claimed- Base Contract	40,963,289	-	40,963,289
0115.1509	Nuclear Safety Systems & Components	Base	Not Claimed- Base Contract	2,710,756	-	2,710,756
0115.1510	Process Mechanical	Base	Not Claimed- Base Contract	15,181,618	-	15,181,618
0115.1511	Mechanical Gloveboxes	Base	Not Claimed- Base Contract	5,593,595	-	5,593,595
0115.1512	Site Development / Infrastructure Improvement	Base	Not Claimed- Base Contract	1,966,135	-	1,966,135
0115.1513	Plant Design System	Base	Not Claimed- Base Contract	52,102,682	450,617	52,553,299
0115.8154	Nuclear Radiation Protections	Base	Not Claimed- Base Contract	-	-	-
0116.1601	DNFSB & Commonality Questions & Issues	Base	Not Claimed- Base Contract	535	-	535
0116.8401	SDG Base Contract Pre-FY 2003	Base	Not Claimed- Base Contract	2,463,869	-	2,463,869
0117.1701	Licensing	Base	Not Claimed- Base Contract	14,916,060	-	14,916,060
0117.1702	Environmental Report	Base	Not Claimed- Base Contract	6,128	-	6,128
0117.1703	Environment	Base	Not Claimed- Base Contract	457,912	-	457,912
0117.1704	Safety & Health	Base	Not Claimed- Base Contract	713,480	-	713,480
0117.1705	Emergency Planning	Base	Not Claimed- Base Contract	149,349	-	149,349
0117.1706	ISA Support (Contractor's ODCs)	Base	Not Claimed- Base Contract	19,852,077	-	19,852,077
0117.1707	Technology Assessment (TA) Support	Base	Not Claimed- Base Contract	1,571,146	-	1,571,146
0117.1710	UCNI Training	Base	Not Claimed- Base Contract	93,039	-	93,039
0118.1801	Office rent, suppl/serv, equi.& furnit L&P	Base	Not Claimed- Base Contract	2,994,997	-	2,994,997
0118.1802	Furniture	Base	Not Claimed- Base Contract	2,378,913	-	2,378,913
0118.1803	Cabling & Telephone	Base	Not Claimed- Base Contract	94,023	-	94,023
0118.1804	Upfit	Base	Not Claimed- Base Contract	387,936	-	387,936
0118.1805	Relocation Services	Base	Not Claimed- Base Contract	10,495	-	10,495
0118.1806	Remote Location Office Space	Base	Not Claimed- Base Contract	415,133	-	415,133
0119.1901	Computer Equipment & Software L&P	Base	Not Claimed- Base Contract	5,719,902	-	5,719,902
0119.1902	Software	Base	Not Claimed- Base Contract	1,136,702	-	1,136,702
0119.1903	Service Contracts	Base	Not Claimed- Base Contract	283,607	-	283,607
0119.1904	Initial Setup	Base	Not Claimed- Base Contract	13,101	-	13,101
0120.8110	Project Management Pre-Construction Planning	Base	Not Claimed- Base Contract	4,974,617	-	4,974,617
0120.8120	Project Controls Pre-Construction	Base	Not Claimed- Base Contract	2,525,925	-	2,525,925

CB&I AREVA MOX Services, LLC.
MFFF 2012 Rebaseline with Addendum Project Cost by Cost Account

Schedule 6.2

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = [A]+[B]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
0120.8130	Project QA Pre-Construction	Base	Not Claimed- Base Contract		-	-
0120.8140	Project ES&H Pre-Construction	Base	Not Claimed- Base Contract	758,325	-	758,325
0120.8160	Project Services & Admin Pre-Construction	Base	Not Claimed- Base Contract	64,361	-	64,361
0120.8170	Procure./Subcontract Admin Pre-Construction	Base	Not Claimed- Base Contract	284,712	-	284,712
0120.8200	PreOpt1BConstrPrjTitleIII EngineeringMgmt-LL EnginProcurement	Base	Not Claimed- Base Contract	3,153	-	3,153
0120.8210	Engineering Civil / Structural Pre-Constructor	Base	Not Claimed- Base Contract	177,361	-	177,361
0120.8220	Engineering Mechanical Pre-Construction	Base	Not Claimed- Base Contract	39,784	-	39,784
0120.8230	Engineering Electrical / I&C Pre-Construction	Base	Not Claimed- Base Contract	60,918	-	60,918
0121.1654	MFFF Operations Planning	Base	Not Claimed- Base Contract	10,880,272	-	10,880,272
0122.1611	PuO2 Polishing Planning	Base	Not Claimed- Base Contract	159,814	-	159,814
0122.1612	DUO2 Supply Planning	Base	Not Claimed- Base Contract	488,321	-	488,321
0123.1420	Up Front Design	Base	Not Claimed- Base Contract	2,823,111	-	2,823,111
0124.1415	DMO - Preserve The Option	Base	Not Claimed- Base Contract	3,134,723	-	3,134,723
0661.6101	Project Office Operations	Base	Not Claimed- Base Contract	6,418,213	-	6,418,213
0661.6102	Personnel Relocations	Base	Not Claimed- Base Contract	57,213	-	57,213
0661.6103	Project Support Services	Base	Not Claimed- Base Contract	97	-	97
0661.6105	Mixed Oxide (MOX) Proj. Ext. Communications	Base	Not Claimed- Base Contract	440,973	-	440,973
0661.6106	IT Labor	Base	Not Claimed- Base Contract	3,753,790	-	3,753,790
0661.6110	Independent Review Team (IRT) Review - NA54	Base	Not Claimed- Base Contract	1,486,360	-	1,486,360
0661.6150	Relocations	Base	Not Claimed- Base Contract	3,056,897	-	3,056,897
0662.6201	Project Controls & Integration	Base	Not Claimed- Base Contract	14,129,225	-	14,129,225
0662.6202	Risk Management	Base	Not Claimed- Base Contract	923,190	-	923,190
0663.6301	QA Program Management & Administration	Base	Not Claimed- Base Contract	597,540	-	597,540
0663.6302	Quality Engineering	Base	Not Claimed- Base Contract	1,224,692	-	1,224,692
0663.6303	Quality Verification	Base	Not Claimed- Base Contract	1,286,519	-	1,286,519
0664.6401	ES&H Integration	Base	Not Claimed- Base Contract	1,340,978	-	1,340,978
0664.6402	Regulatory Affairs Management & Admin.	Base	Not Claimed- Base Contract	431,238	-	431,238
0664.6403	Safety and Health	Base	Not Claimed- Base Contract	75	-	75
0664.6404	Incident Investigation / Corrective Action Program	Base	Not Claimed- Base Contract	(53)	-	(53)
0665.6501	Trade-off Studies	Base	Not Claimed- Base Contract	2,286	-	2,286
0665.6502	Plutonium (Pu) Disposition Study	Base	Not Claimed- Base Contract	457	-	457
0665.6505	NA	Base	Not Claimed- Base Contract		-	-
0666.6600	Project Services & Administration	Base	Not Claimed- Base Contract	1,670	-	1,670
0666.6601	Contracts	Base	Not Claimed- Base Contract	19,104,032	-	19,104,032
0666.6602	Administration	Base	Not Claimed- Base Contract	2,607,252	-	2,607,252
0666.6603	Electronic Doc / Records Management	Base	Not Claimed- Base Contract	1,809,605	-	1,809,605
0666.6604	Training & Internal Communication	Base	Not Claimed- Base Contract	362,896	-	362,896
0666.6605	Project Accounting / Finance	Base	Not Claimed- Base Contract	2,912,125	-	2,912,125
0666.6606	Bank Analysis Fees	Base	Not Claimed- Base Contract	16,703	-	16,703
0666.6608	Procurement	Base	Not Claimed- Base Contract	3,027,990	-	3,027,990
0666.6609	Asset Management	Base	Not Claimed- Base Contract	287,005	-	287,005
0667.6701	Licensing	Base	Not Claimed- Base Contract	4,830	-	4,830
0668.6801	Charlotte Office Space	Base	Not Claimed- Base Contract	52,238	-	52,238
0668.6802	Furniture	Base	Not Claimed- Base Contract	33,304	-	33,304
0668.6803	Cabling & Telephone	Base	Not Claimed- Base Contract	(17,325)	-	(17,325)
0668.6804	UpFit	Base	Not Claimed- Base Contract	3,962	-	3,962
0668.6805	Relocation Services	Base	Not Claimed- Base Contract	2,456	-	2,456
0668.6806	Remote Location Office Space	Base	Not Claimed- Base Contract	46,201	-	46,201
0668.6810	Office Rent, Supplies, & Services	Base	Not Claimed- Base Contract	5,833,773	-	5,833,773
0668.6811	Office Equipment & Furniture Lease & Purchase	Base	Not Claimed- Base Contract	2,607,350	-	2,607,350
0668.6812	Computer Equipment and Software Leases & Purchases	Base	Not Claimed- Base Contract	8,043,555	-	8,043,555

CB&I AREVA MOX Services, LLC.
MFFF 2012 Rebaseline with Addendum Project Cost by Cost Account

Schedule 6.2

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = [A]+[B]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
0668.8810	Offsite Office Rent, Supplies & Services	Base	Not Claimed- Base Contract	3,331,590	-	3,331,590
0668.8811	Offsite Off.Equip.& Furnit. L. & P., and Workspace Upfit	Base	Not Claimed- Base Contract	328,503	-	328,503
0668.8812	Offsite Computer Equip.& Software L.& P.	Base	Not Claimed- Base Contract	749,822	-	749,822
0669.6901	Computer Hardware	Base	Not Claimed- Base Contract	74,923	-	74,923
0669.6902	Computer Software	Base	Not Claimed- Base Contract	21,717	-	21,717
0669.6903	Computer Services Contracts	Base	Not Claimed- Base Contract	18,228	-	18,228
0669.6904	Initial Setup	Base	Not Claimed- Base Contract	(9,464)	-	(9,464)
0670.8299	Process Unit Assembly Planning	Base	Not Claimed- Base Contract	2,234,104	-	2,234,104
1204.8240	PEG BOA's, Sole Source & Adv.Procure. Items	Base	Not Claimed- Base Contract	7,094,929	-	7,094,929
1204.8241	PEG Management	Base	Not Claimed- Base Contract	8,089,063	-	8,089,063
1204.8242	PEG Training & Technical Support	Base	Not Claimed- Base Contract	4,473,163	-	4,473,163
1204.8243	PEG Build to Print Manuf./Install. Required	Base	Not Claimed- Base Contract	420,711	-	420,711
1204.8244	PEG AP/MP Laboratory Design/Build	Base	Not Claimed- Base Contract	2,151,804	-	2,151,804
1204.8245	PEG Documents External Review Support	Base	Not Claimed- Base Contract	411,870	-	411,870
1204.8246	Process Support AP/MP Lab Design/Build	Base	Not Claimed- Base Contract	1,534,414	-	1,534,414
1204.8247	PreOpt1ACnstPrjctProcUnitPEGVendorDesign	Base	Not Claimed- Base Contract	36,139,755	-	36,139,755
1204.8248	PreOpt1BProcUnitsPEG Design/Bld UnitSpecs	Base	Not Claimed- Base Contract	10,069,627	-	10,069,627
1204.8249	PreOpt1ACnstPrjct Proc Units PEG ODCs	Base	Not Claimed- Base Contract	1,431,198	-	1,431,198
1204.8293	Mech/Struct Procurements Engineering	Base	Not Claimed- Base Contract	-	-	-
1205.8250	US Regulations/ Process Requirements	Base	Not Claimed- Base Contract	5,078,781	-	5,078,781
1205.8251	PreOpt1BConstPrjProc-USRG/PRG Req Mgmt	Base	Not Claimed- Base Contract	1,726,646	-	1,726,646
1205.8252	US Regulations Personnel	Base	Not Claimed- Base Contract	1,943,952	-	1,943,952
1205.8253	Process Requirements Personnel	Base	Not Claimed- Base Contract	4,723,359	-	4,723,359
1205.8254	Pre-Option 1A Construction Project Process-General Support	Base	Not Claimed- Base Contract	1,631,079	-	1,631,079
1205.8255	PreOpt1AConstPrjProc-USRG/PRG Admin Spt	Base	Not Claimed- Base Contract	254	-	254
1205.8256	Facility Design Group Support to PEG	Base	Not Claimed- Base Contract	582,035	-	582,035
1205.8257	Systems Engineering Group Support to I55EG	Base	Not Claimed- Base Contract	251,565	-	251,565
1205.8259	PreOpt1AConstPrjProc-USRG/PRG - ODCs	Base	Not Claimed- Base Contract	1,037,150	-	1,037,150
1209.8290	Pre-Option 1B MDG, SDG & PEG Management	Base	Not Claimed- Base Contract	4,788,660	-	4,788,660
1209.8291	DCS Equipment Group Management - ODCs	Base	Not Claimed- Base Contract	552,464	-	552,464
1211.8131	Project QA - Option 1	Base	Not Claimed- Base Contract	666,916	-	666,916
1211.8171	PreOp1BCnstPrjMgmtPurchs Procurement - Mgt & Admin	Base	Not Claimed- Base Contract	1,817,722	-	1,817,722
1212.8292	Commercial Grade Dedication (CGD)	Base	Not Claimed- Base Contract	10,305,148	2,071,902	12,377,050
1212.8293	Chemical/Mechanical Subcontract Technical Representatives (STRs) and	Base	Not Claimed- Base Contract	13,418,339	3,755,396	17,173,735
1212.8294	Electrical/I&C Procurements Engineering	Base	Not Claimed- Base Contract	6,547,780	2,720,741	9,268,521
1212.8295	PEG Support of Others (Facility Eq)	Base	Not Claimed- Base Contract	463	-	463
1212.8296	PassPort Implementation & Support Engineering	Base	Not Claimed- Base Contract	2,291,097	-	2,291,097
1212.8297	PEG - Vendor Support Activities for Self Procurements	Base	Not Claimed- Base Contract	13,490	-	13,490
1212.8298	PEG Management & Administration (Facility Eq)	Base	Not Claimed- Base Contract	1,271,685	-	1,271,685
1213.8292	PEG Technical Support & Training (Facility Eq)	Base	Not Claimed- Base Contract	591,906	-	591,906
1301.8302	DCS Integrated Mgt	Base	Not Claimed- Base Contract	6,536,527	-	6,536,527
1301.8303	MDG Support Services	Base	Not Claimed- Base Contract	2,554,857	-	2,554,857
1301.8304	MDG Travel & Relocation - DCS	Base	Not Claimed- Base Contract	2,923,393	-	2,923,393
1301.8305	Production Centers Mgt	Base	Not Claimed- Base Contract	1,834,853	-	1,834,853
1301.8306	MDG Travel & Relocation Production Centers	Base	Not Claimed- Base Contract	1,574,026	-	1,574,026
1301.8307	MDG ODCs Production Centers	Base	Not Claimed- Base Contract	2,907,943	-	2,907,943
1301.8308	MDG Procurement Engineering Support	Base	Not Claimed- Base Contract	806,667	-	806,667
1301.8390	Design Offices Mgt	Base	Not Claimed- Base Contract	13,209,064	-	13,209,064
1301.8391	Production Internal Support	Base	Not Claimed- Base Contract	11,044,415	-	11,044,415
1302.8302	GDE - Rod Decladding	Base	Not Claimed- Base Contract	-	-	-
1302.8309	Technical Management	Base	Not Claimed- Base Contract	14,604,868	-	14,604,868

CB&I AREVA MOX Services, LLC.
MFFF 2012 Rebaseline with Addendum Project Cost by Cost Account

Schedule 6.2

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = [A]+[B]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
1302.8310	Technical Requirement Representatives	Base	Not Claimed- Base Contract	3,394,330	-	3,394,330
1302.8391	GDE - Rod Decladding	Base	Not Claimed- Base Contract	-	-	-
1302.8392	Follow-up	Base	Not Claimed- Base Contract	11,387,710	-	11,387,710
1302.839A	TSR Support from PDG	Base	Not Claimed- Base Contract	495,197	-	495,197
1302.839B	LLP/LTP/NTP Detailed Piping Design	Base	Not Claimed- Base Contract	188,202	-	188,202
1303.8312	NDD - PuO2 Can Receiving & Emptying	Base	Not Claimed- Base Contract	1,180,158	-	1,180,158
1303.8313	NDP - Primary Dosing	Base	Not Claimed- Base Contract	3,075,251	-	3,075,251
1303.8314	NDS - Final Dosing	Base	Not Claimed- Base Contract	3,093,351	-	3,093,351
1303.8319	NTM - Jar Storage & Handling	Base	Not Claimed- Base Contract	4,266,963	-	4,266,963
1303.8320	NXR - Powder Auxiliary	Base	Not Claimed- Base Contract	2,032,952	-	2,032,952
1304.8311	DCE - PuO2 Buffer Storage	Base	Not Claimed- Base Contract	1,181,879	-	1,181,879
1304.8312	NDD Conformance	Base	Not Claimed- Base Contract	132,157	-	132,157
1304.8313	NDP Conformance	Base	Not Claimed- Base Contract	18,959	-	18,959
1304.8314	NDS Conformance	Base	Not Claimed- Base Contract	120,759	-	120,759
1304.8319	NTM Conformance	Base	Not Claimed- Base Contract	68,967	-	68,967
1304.831A	VDR Design	Base	Not Claimed- Base Contract	393,445	-	393,445
1304.831B	VDU Design	Base	Not Claimed- Base Contract	174,431	-	174,431
1304.831C	DCM Design	Base	Not Claimed- Base Contract	582,630	-	582,630
1304.831G	GMK Design	Base	Not Claimed- Base Contract	235,016	-	235,016
1304.831H	SCE Design	Base	Not Claimed- Base Contract	708,694	-	708,694
1304.831J	SMK Design	Base	Not Claimed- Base Contract	641,167	-	641,167
1304.831L	SXE Design	Base	Not Claimed- Base Contract	403,954	-	403,954
1304.831M	TAS Design	Base	Not Claimed- Base Contract	675,546	-	675,546
1304.831N	TCL/TCK/TGJ Design	Base	Not Claimed- Base Contract	644,809	-	644,809
1304.831P	TCP Design	Base	Not Claimed- Base Contract	371,805	-	371,805
1304.831Q	TGM Design	Base	Not Claimed- Base Contract	1,274,482	-	1,274,482
1304.831R	TGV Design	Base	Not Claimed- Base Contract	-	-	-
1304.831Y	LFX Design	Base	Not Claimed- Base Contract	277,136	-	277,136
1304.8320	NXR Conformance	Base	Not Claimed- Base Contract	2,071	-	2,071
1304.8321	NCR - Scrap Processing	Base	Not Claimed- Base Contract	4,035,217	-	4,035,217
1304.8324	PRE / PRF - Grinding	Base	Not Claimed- Base Contract	2,303,385	-	2,303,385
1304.8325	PTE/PTF — Pellet Inspect & Sorting	Base	Not Claimed- Base Contract	396,055	-	396,055
1304.8326	PQE — Quality Control & Manual Sorting	Base	Not Claimed- Base Contract	444,859	-	444,859
1304.8327	PAD - Pellet Repackaging	Base	Not Claimed- Base Contract	277,167	-	277,167
1304.8328	PAR - Scrap Box Loading	Base	Not Claimed- Base Contract	478,804	-	478,804
1304.8329	PSE - Green Pellet Storage	Base	Not Claimed- Base Contract	629,885	-	629,885
1304.832A	KCB Design	Base	Not Claimed- Base Contract	160,747	-	160,747
1304.832G	KDA Design	Base	Not Claimed- Base Contract	330,971	-	330,971
1304.8330	PSF - Sintered Pellet Storage	Base	Not Claimed- Base Contract	717,822	-	717,822
1304.8331	PSI - Scrape Pellet Storage	Base	Not Claimed- Base Contract	1,146,863	-	1,146,863
1304.8332	PSJ - Ground & Sorted Pellet Storage	Base	Not Claimed- Base Contract	985,943	-	985,943
1304.8333	PML - Pellet Handling	Base	Not Claimed- Base Contract	4,201,902	-	4,201,902
1304.8336	GDE - Rod Decladding	Base	Not Claimed- Base Contract	932,184	-	932,184
1304.8338	SEK Helium Leak Test	Base	Not Claimed- Base Contract	220,636	-	220,636
1304.8344	LCT - Test Line	Base	Not Claimed- Base Contract	951,193	-	951,193
1304.8345	VDR - Filter Dismantling	Base	Not Claimed- Base Contract	12	-	12
1304.8346	DDP - UO2 Drum Emptying	Base	Not Claimed- Base Contract	537,418	-	537,418
1304.8348	KDM Conformance	Base	Not Claimed- Base Contract	477,130	-	477,130
1304.8363	KDA - Decanning (B)	Base	Not Claimed- Base Contract	3,415,974	-	3,415,974
1304.8365	KPG Sampling, Automatic Conformance	Base	Not Claimed- Base Contract	668,054	-	668,054
1304.8370	KPA 4010 Purification Cycle Conformance	Base	Not Claimed- Base Contract	233,571	-	233,571

CB&I AREVA MOX Services, LLC.
MFFF 2012 Rebaseline with Addendum Project Cost by Cost Account

Schedule 6.2

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = [A]+[B]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
1304.8375	KDM - Milling (AFS) - PuO2 Can Handling	Base	Not Claimed- Base Contract	529,834	-	529,834
1304.8376	KDM 2000 - Prepolishing Milling Conformance	Base	Not Claimed- Base Contract	647,479	-	647,479
1304.8377	KDM 2200 Pre-Polishing Milling	Base	Not Claimed- Base Contract	707,373	-	707,373
1304.8378	KDR 1/2/3/4 ADO Conform	Base	Not Claimed- Base Contract	594	-	594
1304.8379	KDR - Recanning Unit	Base	Not Claimed- Base Contract	210,863	-	210,863
1304.8397	Struct. LLE - Aiken	Base	Not Claimed- Base Contract	305,686	-	305,686
1305.8315	LLP Pneumatic Transfer (33 mm)	Base	Not Claimed- Base Contract	1,807,734	-	1,807,734
1305.8316	LLP Pneumatic Transfer (76 mm)	Base	Not Claimed- Base Contract	986,221	-	986,221
1305.8318	NTP Pneumatic Transfer (133 mm)	Base	Not Claimed- Base Contract	1,085,049	-	1,085,049
1305.8325	PTE/PTF - Pellet Inspect & Sorting	Base	Not Claimed- Base Contract	1,593,203	-	1,593,203
1305.8326	PQE - QC & Manual Sorting	Base	Not Claimed- Base Contract	1,186,020	-	1,186,020
1305.8361	KCB - PuO2 Homogenization & Sampling	Base	Not Claimed- Base Contract	1,876,771	-	1,876,771
1305.8362	KCC - Canning	Base	Not Claimed- Base Contract	1,841,250	-	1,841,250
1305.8365	KPG - Liquid Sampling (W1)	Base	Not Claimed- Base Contract	900,405	-	900,405
1305.8366	KDB/KPF Electrolyzers (W9)	Base	Not Claimed- Base Contract	1,365,619	-	1,365,619
1305.8367	KCA - Oxalic Precip Metering Wheels	Base	Not Claimed- Base Contract	821,657	-	821,657
1305.8368	KDA - Dosing Hoppers (W6)	Base	Not Claimed- Base Contract	2,271,901	-	2,271,901
1305.8369	KPA/KPB - Settler Mixers (W7)	Base	Not Claimed- Base Contract	911,336	-	911,336
1305.8370	KPA 4010 Purification Cycle	Base	Not Claimed- Base Contract	377,100	-	377,100
1305.8371	KCA - Oxalic Precip Oxid Precip & Filter	Base	Not Claimed- Base Contract	718,321	-	718,321
1305.8372	KCA - Oxalic Precip Oxid Calcin Furn	Base	Not Claimed- Base Contract	906,346	-	906,346
1305.8373	KCB - PuO2 Tumbler Mixer	Base	Not Claimed- Base Contract	532,877	-	532,877
1305.8374	KDD - Dechlorination / Dissolution	Base	Not Claimed- Base Contract	3,076,733	-	3,076,733
1305.8376	KDM - Milling (AFS)	Base	Not Claimed- Base Contract	1,955,112	-	1,955,112
1305.8378	KDR - Recanning Unit	Base	Not Claimed- Base Contract	1,711,309	-	1,711,309
1305.8380	KPB 1000 Solvent Recovery	Base	Not Claimed- Base Contract	779,190	-	779,190
1305.8381	KDM-Pre-Polishing MillingUnits6000-7400 Dsgr	Base	Not Claimed- Base Contract	1,119,284	-	1,119,284
1305.8399	Dosing Hopper - Structural Qualification	Base	Not Claimed- Base Contract	48,456	-	48,456
1306.8322	NPE/NPF - Homogenization & Pelletizing	Base	Not Claimed- Base Contract	1,439,629	-	1,439,629
1306.8323	PFE/PFF - Sintering Furnace	Base	Not Claimed- Base Contract	8	-	8
1306.8334	GME - Rod Cladding & Decontamination	Base	Not Claimed- Base Contract	6,773,734	-	6,773,734
1306.8339	SDK - Rod Inspection & Sorting	Base	Not Claimed- Base Contract	1,341,572	-	1,341,572
1306.8347	NBX/NBY - Ball Mining	Base	Not Claimed- Base Contract	2,641,655	-	2,641,655
1306.8348	KDM - Milling	Base	Not Claimed- Base Contract	937,277	-	937,277
1306.8349	NPG/H/I-Homoginization & Pelletizing Desigr	Base	Not Claimed- Base Contract	5,925,669	-	5,925,669
1306.8398	Struct. LLE - Bagnol	Base	Not Claimed- Base Contract	957,492	-	957,492
1307.831A	VDR	Base	Not Claimed- Base Contract	314,988	-	314,988
1307.831B	VDU	Base	Not Claimed- Base Contract	203,988	-	203,988
1307.831C	DCM	Base	Not Claimed- Base Contract	186,681	-	186,681
1307.831D	DCP	Base	Not Claimed- Base Contract	-	-	-
1307.831E	VDQ	Base	Not Claimed- Base Contract	-	-	-
1307.831F	VDT	Base	Not Claimed- Base Contract	-	-	-
1307.831G	GMK	Base	Not Claimed- Base Contract	152,250	-	152,250
1307.831H	SCE	Base	Not Claimed- Base Contract	-	-	-
1307.831J	SMK	Base	Not Claimed- Base Contract	188,086	-	188,086
1307.831K	STK	Base	Not Claimed- Base Contract	166,743	-	166,743
1307.831L	SXE	Base	Not Claimed- Base Contract	-	-	-
1307.831M	TAS	Base	Not Claimed- Base Contract	-	-	-
1307.831N	TCL/TCK/TGJ	Base	Not Claimed- Base Contract	-	-	-
1307.831P	TCP	Base	Not Claimed- Base Contract	249,043	-	249,043
1307.831Q	TGM	Base	Not Claimed- Base Contract	26,121	-	26,121

CB&I AREVA MOX Services, LLC.
MFFF 2012 Rebaseline with Addendum Project Cost by Cost Account

Schedule 6.2

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = [A]+[B]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
1307.831R	TGV	Base	Not Claimed- Base Contract		-	-
1307.831S	Grp 5.1	Base	Not Claimed- Base Contract		-	-
1307.831T	Grp 5.2	Base	Not Claimed- Base Contract		-	-
1307.831U	Grp 5.3	Base	Not Claimed- Base Contract		-	-
1307.831X	Grp 5.6	Base	Not Claimed- Base Contract		-	-
1307.831Y	Grp 5.8 / LFX	Base	Not Claimed- Base Contract		-	-
1307.832A	KCB	Base	Not Claimed- Base Contract		-	-
1307.832B	KCD	Base	Not Claimed- Base Contract		-	-
1307.832C	KPA	Base	Not Claimed- Base Contract		-	-
1307.832D	KPB	Base	Not Claimed- Base Contract		-	-
1307.832E	KPC	Base	Not Claimed- Base Contract		-	-
1307.832F	KWD	Base	Not Claimed- Base Contract		-	-
1307.832G	KDA	Base	Not Claimed- Base Contract		-	-
1308.832A	KCB	Base	Not Claimed- Base Contract		-	-
1308.832B	KCD	Base	Not Claimed- Base Contract		-	-
1308.832C	KPA	Base	Not Claimed- Base Contract		-	-
1308.832D	KPB	Base	Not Claimed- Base Contract		-	-
1308.832E	KPC	Base	Not Claimed- Base Contract		-	-
1308.832F	KWD	Base	Not Claimed- Base Contract		-	-
1308.832G	KDA	Base	Not Claimed- Base Contract		-	-
1308.832H	Grp 5.4	Base	Not Claimed- Base Contract		-	-
1308.832J	Grp 5.5	Base	Not Claimed- Base Contract		-	-
1309.839C	DCP Design	Base	Not Claimed- Base Contract	1,509,027	-	1,509,027
1309.839D	SXE DCR 10-0422	Base	Not Claimed- Base Contract	175,664	-	175,664
1309.83KU	K Unit Pumps and Valves Design	Base	Not Claimed- Base Contract	2,048,230	-	2,048,230
1310.83JL	JLE and LTTA VAR	Base	Not Claimed- Base Contract	501,479	-	501,479
1310.83LB	Lab Unit Glovebox Design	Base	Not Claimed- Base Contract	4,692,873	-	4,692,873
1310.83LE	Laboratory Responsible Engineers and STRs	Base	Not Claimed- Base Contract	1,893,632	-	1,893,632
1310.83TS	Task Support Requests	Base	Not Claimed- Base Contract	606,129	-	606,129
1311.83MF	Multi Fuel Design - DCRs	Base	Not Claimed- Base Contract	1,091,946	-	1,091,946
1400.8401	SDG Base Contract Pre-FY 2003	Base	Not Claimed- Base Contract		-	-
1401.8402	Management	Base	Not Claimed- Base Contract	15,178,727	-	15,178,727
1401.8403	Support Services	Base	Not Claimed- Base Contract	16,693,729	-	16,693,729
1401.8404	SDG Travel & Relocation DCS	Base	Not Claimed- Base Contract	3,595,869	-	3,595,869
1401.8405	Facility Space, Utilities Supplies & Services	Base	Not Claimed- Base Contract	585,591	-	585,591
1401.8418	Design Reviews	Base	Not Claimed- Base Contract	421,952	-	421,952
1401.8419	PLC & Supervisor for Fire Safety	Base	Not Claimed- Base Contract		-	-
1402.8406	Platform Hardware & Maintenance	Base	Not Claimed- Base Contract	4,064,808	-	4,064,808
1402.8407	Platform Hardware & Maintenance - Aiken	Base	Not Claimed- Base Contract	9,885,980	-	9,885,980
1402.8408	SDG Procurement Engineering Support	Base	Not Claimed- Base Contract	2,118,987	-	2,118,987
1402.8410	Standards	Base	Not Claimed- Base Contract	6,652,081	-	6,652,081
1402.8411	Networks	Base	Not Claimed- Base Contract	846,427	-	846,427
1402.8413	Laboratory Information Management System (LIMS)	Base	Not Claimed- Base Contract	2,159,452	-	2,159,452
1402.8414	Process PCs	Base	Not Claimed- Base Contract	2,715,494	-	2,715,494
1402.8417	RESERVED	Base	Not Claimed- Base Contract		-	-
1402.8477	PLC & Supervisor for Unit KWG	Base	Not Claimed- Base Contract		-	-
1402.8490	Simulation & Testing	Base	Not Claimed- Base Contract	3,516,527	-	3,516,527
1402.8497	CGD Embedded Software Evaluation Support	Base	Not Claimed- Base Contract		-	-
1403.8412	Manufacturing Management Information System (MMIS)	Base	Not Claimed- Base Contract	11,834,983	-	11,834,983
1404.8420	PLC's General	Base	Not Claimed- Base Contract	9,163,751	-	9,163,751
1404.8421	PLC & Supervisor for Unit DRS/DDP	Base	Not Claimed- Base Contract	317,978	-	317,978

CB&I AREVA MOX Services, LLC.
MFFF 2012 Rebaseline with Addendum Project Cost by Cost Account

Schedule 6.2

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = [A]+[B]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
1404.8422	PLC & Supervisor for Unit DCP/DCM	Base	Not Claimed- Base Contract	465,729	-	465,729
1404.8423	PLC & Supervisor for Unit DCE/NTP	Base	Not Claimed- Base Contract	542,483	-	542,483
1404.8424	PLC & Supervisor for Unit NDD	Base	Not Claimed- Base Contract	786,601	-	786,601
1404.8425	PLC & Supervisor for Unit NDP	Base	Not Claimed- Base Contract	1,075,897	-	1,075,897
1404.8426	PLC & Supervisor for Unit NBX/NBY	Base	Not Claimed- Base Contract	711,638	-	711,638
1404.8427	PLC & Supervisor for Unit NDS	Base	Not Claimed- Base Contract	1,036,479	-	1,036,479
1404.8428	PLC & Supervisor for Unit NXR	Base	Not Claimed- Base Contract	785,887	-	785,887
1404.8429	PLC & Supervisor for Unit NCR	Base	Not Claimed- Base Contract	803,389	-	803,389
1404.8430	PLC & Supervisor for Unit NTM	Base	Not Claimed- Base Contract	1,069,351	-	1,069,351
1404.8431	PLC & Supervisor for Unit NPE/NPF	Base	Not Claimed- Base Contract	1,530,655	-	1,530,655
1404.8432	PLC & Supervisor for Unit LTP	Base	Not Claimed- Base Contract	457,658	-	457,658
1404.8433	PLC & Supervisor for Unit PFE/PFF	Base	Not Claimed- Base Contract	1,351,119	-	1,351,119
1404.8434	PLC & Supervisor for Unit PRE/PRF	Base	Not Claimed- Base Contract	863,994	-	863,994
1404.8435	PLC & Supervisor for Unit PTE/PTF	Base	Not Claimed- Base Contract	976,017	-	976,017
1404.8436	PLC & Supervisor for Unit PQE	Base	Not Claimed- Base Contract	690,866	-	690,866
1404.8437	PLC & Supervisor for Unit PAD	Base	Not Claimed- Base Contract	717,963	-	717,963
1404.8438	PLC & Supervisor for Unit PAR	Base	Not Claimed- Base Contract	358,147	-	358,147
1404.8439	PLC & Supervisor for Unit PSE	Base	Not Claimed- Base Contract	509,018	-	509,018
1404.8440	PLC & Supervisor for Unit PSF	Base	Not Claimed- Base Contract	445,990	-	445,990
1404.8441	PLC & Supervisor for Unit PSI	Base	Not Claimed- Base Contract	699,084	-	699,084
1404.8442	PLC & Supervisor for Unit PSJ	Base	Not Claimed- Base Contract	346,367	-	346,367
1404.8443	PLC & Supervisor for Unit GME/GMF	Base	Not Claimed- Base Contract	2,391,966	-	2,391,966
1404.8444	PLC & Supervisor for Unit GMK	Base	Not Claimed- Base Contract	429,250	-	429,250
1404.8445	PLC & Supervisor for Unit GDE	Base	Not Claimed- Base Contract	382,174	-	382,174
1404.8446	PLC & Supervisor for Unit SXE	Base	Not Claimed- Base Contract	312,383	-	312,383
1404.8447	PLC & Supervisor for Unit SEK	Base	Not Claimed- Base Contract	501,346	-	501,346
1404.8448	PLC & Supervisor for Unit SDK	Base	Not Claimed- Base Contract	854,364	-	854,364
1404.8449	PLC & Supervisor for Unit SCE	Base	Not Claimed- Base Contract	389,985	-	389,985
1404.8450	PLC & Supervisor for Unit SMK/STK	Base	Not Claimed- Base Contract	444,178	-	444,178
1404.8451	PLC & Supervisor for Unit TGM	Base	Not Claimed- Base Contract	511,706	-	511,706
1404.8452	PLC & Supervisor for Unit TGV	Base	Not Claimed- Base Contract	76,311	-	76,311
1404.8453	PLC & Supervisor for Unit TAS	Base	Not Claimed- Base Contract	589,992	-	589,992
1404.8454	PLC & Supervisor for Unit TCK	Base	Not Claimed- Base Contract	216,548	-	216,548
1404.8455	PLC & Supervisor for Unit TCP	Base	Not Claimed- Base Contract	454,702	-	454,702
1404.8456	PLC & Supervisor for Unit TCL/TGJ	Base	Not Claimed- Base Contract	307,091	-	307,091
1404.8457	PLC & Supervisor for Unit TXE	Base	Not Claimed- Base Contract	-	-	-
1404.8458	PLC & Supervisor for Unit LCT	Base	Not Claimed- Base Contract	95,641	-	95,641
1404.8459	PLC & Supervisor for Unit VDQ	Base	Not Claimed- Base Contract	-	-	-
1404.8460	PLC & Supervisor for Unit VDT	Base	Not Claimed- Base Contract	383,623	-	383,623
1404.8461	PLC & Supervisor for Unit VDR/VDU	Base	Not Claimed- Base Contract	29,649	-	29,649
1404.8485	PLC & Supervisor for Fire Safety	Base	Not Claimed- Base Contract	42,505	-	42,505
1404.8486	PLC & Supervisor for LGF	Base	Not Claimed- Base Contract	305,291	-	305,291
1404.8487	M&I - PRE/PRF	Base	Not Claimed- Base Contract	-	-	-
1405.8462	PLC & Supervisor for Unit KDD	Base	Not Claimed- Base Contract	863,150	-	863,150
1405.8463	PLC & Supervisor for Unit KDA	Base	Not Claimed- Base Contract	1,813,250	-	1,813,250
1405.8464	PLC & Supervisor for Unit KDB	Base	Not Claimed- Base Contract	455,895	-	455,895
1405.8466	PLC & Supervisor for Unit KPA	Base	Not Claimed- Base Contract	926,538	-	926,538
1405.8467	PLC & Supervisor for Unit KPB	Base	Not Claimed- Base Contract	317,577	-	317,577
1405.8468	PLC & Supervisor for Unit KPC	Base	Not Claimed- Base Contract	391,037	-	391,037
1405.8469	PLC for Unit LFX	Base	Not Claimed- Base Contract	45,858	-	45,858
1405.8470	PLC & Supervisor for Unit KPG	Base	Not Claimed- Base Contract	650,175	-	650,175

CB&I AREVA MOX Services, LLC.
MFFF 2012 Rebaseline with Addendum Project Cost by Cost Account

Schedule 6.2

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C] = [A]+[B]
				2012 Rebaseline	2012 Rebaseline Addendum	2012 Rebaseline with Addendum
1405.8471	PLC & Supervisor for Unit LLP	Base	Not Claimed- Base Contract	703,119	-	703,119
1405.8472	PLC & Supervisor for Unit KCA	Base	Not Claimed- Base Contract	481,004	-	481,004
1405.8473	PLC & Supervisor for Unit KCB	Base	Not Claimed- Base Contract	714,164	-	714,164
1405.8474	PLC & Supervisor for Unit KCC	Base	Not Claimed- Base Contract	545,313	-	545,313
1405.8475	PLC & Supervisor for Unit KCD	Base	Not Claimed- Base Contract	395,510	-	395,510
1405.8476	PLC & Supervisor for Unit KWD	Base	Not Claimed- Base Contract	336,167	-	336,167
1405.8477	PLC & Supervisor for Unit KWG	Base	Not Claimed- Base Contract	373,415	-	373,415
1405.8478	PLC & Supervisor for Unit KDM	Base	Not Claimed- Base Contract	2,322,500	-	2,322,500
1405.8480	PLC & Sup. for Unit KUA/KUB/KUD/KUG/KUH	Base	Not Claimed- Base Contract	567,817	-	567,817
1405.8481	PLC & Supervisor for Ventilation	Base	Not Claimed- Base Contract	1,090,387	-	1,090,387
1405.8482	PLC & Supervisor for Electrical Distributor	Base	Not Claimed- Base Contract	513,569	-	513,569
1405.8483	PLC & Supervisor for Fluids	Base	Not Claimed- Base Contract	656,234	-	656,234
1405.8484	PLC & Supervisor for Unit KDR	Base	Not Claimed- Base Contract	53,068	-	53,068
1405.8486	PLC & Supervisor for LGF	Base	Not Claimed- Base Contract	-	-	-
1405.8490	Simulation & Testing	Base	Not Claimed- Base Contract	-	-	-
1405.8494	Independent Software Verification & Validation	Base	Not Claimed- Base Contract	-	-	-
1405.8496	SPLC Procurement Contract Oversight	Base	Not Claimed- Base Contract	12,237,107	-	12,237,107
1405.8497	CGD Embedded Software Evaluation Support	Base	Not Claimed- Base Contract	662,001	-	662,001
1406.8419	Software Analysis & Translation	Base	Not Claimed- Base Contract	2,911,871	-	2,911,871
1407.8409	PLC & Supervisor for Fire Safety	Base	Not Claimed- Base Contract	-	-	-
Base Subtotal				\$ 1,040,669,658	\$ 10,080,547	\$ 1,050,750,205
MFFF Project Total				\$ 6,328,584,918	\$ 285,916,668	\$ 6,614,501,585

Sources:

[A] 2012 contract proposal value as stated in December 2012 PRISM data

[B] Schedule 6.21

[C] Calculated

CB&I AREVA MOX Services, LLC.
MFFF Project Cost by Trend - Detail

Schedule 6.21

Trend ⁽¹⁾	Cost Account	Cost Account Description	Contract	Claim Category	2012 Rebaseline Addendum ⁽¹⁾
EAC 12-0761A	1504.8541	Supervision / Admin	Option 1	Construction Management	\$ 4,043,003
Subtotal					\$ 4,043,003
EAC 12-0762A	1728.2801	Yard Electrical & Lighting	Option 1	MFFF Construction - Installation/Materials	\$ 1,001,856
EAC 12-0762A	1741.4180	Electrical	Option 1	MFFF Construction - Installation/Materials	7,957,015
EAC 12-0762A	1742.4280	Electrical	Option 1	MFFF Construction - Installation/Materials	5,113,742
EAC 12-0762A	1743.4380	Electrical	Option 1	MFFF Construction - Installation/Materials	4,472,321
EAC 12-0762A	1751.5180	Electrical	Option 1	MFFF Construction - Installation/Materials	2,413,665
EAC 12-0762A	1752.5280	Electrical	Option 1	MFFF Construction - Installation/Materials	1,869,083
EAC 12-0762A	1753.5380	Electrical	Option 1	MFFF Construction - Installation/Materials	2,622,067
EAC 12-0762A	1754.5480	Electrical	Option 1	MFFF Construction - Installation/Materials	2,078,460
EAC 12-0762A	1755.5580	Electrical	Option 1	MFFF Construction - Installation/Materials	439,431
EAC 12-0762A	1761.6180	Electrical	Option 1	MFFF Construction - Installation/Materials	1,032,629
EAC 12-0762A	1762.6280	Electrical	Option 1	MFFF Construction - Installation/Materials	470,823
EAC 12-0762A	1763.6380	Electrical	Option 1	MFFF Construction - Installation/Materials	377,760
EAC 12-0762A	1771.7180	Electrical	Option 1	MFFF Construction - Installation/Materials	139,719
EAC 12-0762A	1774.7420	Bulk Cable for MFFF Construction	Option 1	MFFF Construction - Installation/Materials	2,935,805
EAC 12-0762A	1774.7432	Electrical Material and Other Miscellaneous Labor Acct	Option 1	MFFF Construction - Installation/Materials	16,741,316
EAC 12-0762A	1774.7445	Craft Orientation & Training	Option 1	MFFF Construction - Installation/Materials	1,908,070
Subtotal					\$ 51,573,762
EAC 12-0763A	1736.3653	Mechanical / Piping	Option 1	MFFF Construction - Installation/Materials	\$ 602,200
EAC 12-0763A	1736.3656	Emerg.Diesel Gen.System/Equipment	Option 1	MFFF Construction - Installation/Materials	270,645
Subtotal					\$ 872,845
EAC 12-0764A	1741.4130	MOX Processing Area (BMP) – MOX Processing Area – Level 1 – Fire Pro	Option 1	MFFF Construction - Installation/Materials	\$ (139,560)
EAC 12-0764A	1742.4230	MOX Processing Area (BMP) – MOX Processing Area – Level 2 – Fire Pro	Option 1	MFFF Construction - Installation/Materials	87,277
EAC 12-0764A	1743.4330	MOX Processing Area (BMP) – MOX Processing Area – Level 3 – Fire Pro	Option 1	MFFF Construction - Installation/Materials	417,575
EAC 12-0764A	1751.5130	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 1 –	Option 1	MFFF Construction - Installation/Materials	113,711
EAC 12-0764A	1752.5230	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 2 –	Option 1	MFFF Construction - Installation/Materials	32,491
EAC 12-0764A	1753.5330	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 3 –	Option 1	MFFF Construction - Installation/Materials	110,733
EAC 12-0764A	1754.5430	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 4 –	Option 1	MFFF Construction - Installation/Materials	132,878
EAC 12-0764A	1755.5530	Aqueous Polishing Process Area (BAP) – AP Process Area – Level 5 –	Option 1	MFFF Construction - Installation/Materials	157,060
EAC 12-0764A	1761.6130	Shipping and Receiving Area (BSR) – Shipping and Receiving Area – Le	Option 1	MFFF Construction - Installation/Materials	117,757
EAC 12-0764A	1762.6230	Shipping and Receiving Area (BSR) – Shipping and Receiving Area – Le	Option 1	MFFF Construction - Installation/Materials	366,313
EAC 12-0764A	1763.6330	Shipping and Receiving Area (BSR) – Shipping and Receiving Area – Le	Option 1	MFFF Construction - Installation/Materials	183,030
EAC 12-0764A	1774.7454	Bulk Procurement - Material	Option 1	MFFF Construction - Installation/Materials	(154,104)
EAC 12-0764A	1774.7455	Distributable - Subcontract	Option 1	MFFF Construction - Installation/Materials	464,411
Subtotal					\$ 1,889,572
EAC 12-0766A	1741.4120	HVAC	Option 1	MFFF Construction - Installation/Materials	\$ 11,748,772
EAC 12-0766A	1742.4220	HVAC	Option 1	MFFF Construction - Installation/Materials	(100,216)
EAC 12-0766A	1743.4320	HVAC	Option 1	MFFF Construction - Installation/Materials	1,394,065
EAC 12-0766A	1744.4420	HVAC	Option 1	MFFF Construction - Installation/Materials	1,827,158

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Trend ⁽¹⁾	Cost Account	Cost Account Description	Contract	Claim Category	2012 Rebaseline Addendum ⁽¹⁾
EAC 12-0766A	1751.5120	HVAC	Option 1	MFFF Construction - Installation/Materials	3,194,256
EAC 12-0766A	1752.5220	HVAC	Option 1	MFFF Construction - Installation/Materials	1,359,260
EAC 12-0766A	1753.5320	HVAC	Option 1	MFFF Construction - Installation/Materials	1,168,362
EAC 12-0766A	1754.5420	HVAC	Option 1	MFFF Construction - Installation/Materials	590,359
EAC 12-0766A	1755.5520	HVAC	Option 1	MFFF Construction - Installation/Materials	3,172,482
EAC 12-0766A	1761.6120	HVAC	Option 1	MFFF Construction - Installation/Materials	(1,517,885)
EAC 12-0766A	1762.6220	HVAC	Option 1	MFFF Construction - Installation/Materials	(488,132)
EAC 12-0766A	1763.6320	HVAC	Option 1	MFFF Construction - Installation/Materials	(200,037)
EAC 12-0766A	1771.7120	HVAC	Option 1	MFFF Construction - Installation/Materials	(758,583)
EAC 12-0766A	1774.7424	Distributables - Bulk Commodity - HVAC	Option 1	MFFF Construction - Installation/Materials	(219,319)
EAC 12-0766A	1774.7435	Distributables - HVAC Equipment	Option 1	MFFF Construction - Installation/Materials	27,029,537
EAC 12-0766A	1774.7440	Support Building for the Fabrication of Supports on Site Specific to	Option 1	MFFF Construction - Installation/Materials	22,833,613
Subtotal					\$ 71,033,692
EAC 12-0766B	1741.4120	HVAC	Option 1	MFFF Construction - Installation/Materials	\$ (404,144)
EAC 12-0766B	1742.4220	HVAC	Option 1	MFFF Construction - Installation/Materials	733,809
EAC 12-0766B	1743.4320	HVAC	Option 1	MFFF Construction - Installation/Materials	980,947
EAC 12-0766B	1744.4420	HVAC	Option 1	MFFF Construction - Installation/Materials	296,014
EAC 12-0766B	1761.6120	HVAC	Option 1	MFFF Construction - Installation/Materials	1,383,724
EAC 12-0766B	1762.6220	HVAC	Option 1	MFFF Construction - Installation/Materials	163,990
EAC 12-0766B	1763.6320	HVAC	Option 1	MFFF Construction - Installation/Materials	1,086,680
EAC 12-0766B	1771.7120	HVAC	Option 1	MFFF Construction - Installation/Materials	1,072,294
EAC 12-0766B	1774.7424	Distributables - Bulk Commodity - HVAC	Option 1	MFFF Construction - Installation/Materials	(135,000)
EAC 12-0766B	1774.7435	Distributables - HVAC Equipment	Option 1	MFFF Construction - Installation/Materials	(5,083,702)
EAC 12-0766B	1774.7440	Support Building for the Fabrication of Supports on Site Specific to	Option 1	MFFF Construction - Installation/Materials	(94,612)
Subtotal					\$ -
EAC 12-0767A	1741.4190	Instrumentation	Option 1	MFFF Construction - Installation/Materials	\$ 470,592
EAC 12-0767A	1742.4290	Instrumentation	Option 1	MFFF Construction - Installation/Materials	56,180
EAC 12-0767A	1743.4390	Instrumentation	Option 1	MFFF Construction - Installation/Materials	6,099,305
EAC 12-0767A	1752.5290	Instrumentation	Option 1	MFFF Construction - Installation/Materials	56,180
EAC 12-0767A	1753.5390	Instrumentation	Option 1	MFFF Construction - Installation/Materials	56,180
EAC 12-0767A	1755.5590	Instrumentation	Option 1	MFFF Construction - Installation/Materials	6,092,808
EAC 12-0767A	1761.6190	Instrumentation	Option 1	MFFF Construction - Installation/Materials	434,053
EAC 12-0767A	1763.6390	Instrumentation	Option 1	MFFF Construction - Installation/Materials	377,873
EAC 12-0767A	1774.7433	Instrumentation & Controls Material	Option 1	MFFF Construction - Installation/Materials	(1,923,606)
Subtotal					\$ 11,719,567
EAC 12-0768A	1741.4170	Other Equipment	Option 1	MFFF Construction - Installation/Materials	\$ 775,159
EAC 12-0768A	1751.5140	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	5,000
EAC 12-0768A	1751.5150	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	1,739,865
EAC 12-0768A	1751.5170	Other Equipment	Option 1	MFFF Construction - Installation/Materials	173,825
EAC 12-0768A	1752.5250	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	3,818,859
EAC 12-0768A	1753.5350	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	342,275

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Trend ⁽¹⁾	Cost Account	Cost Account Description	Contract	Claim Category	2012 Rebaseline Addendum ⁽¹⁾
EAC 12-0768A	1754.5440	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	245,523
EAC 12-0768A	1754.5450	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	175,740
EAC 12-0768A	1755.5540	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	51,150
EAC 12-0768A	1755.5550	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	252,872
EAC 12-0768A	1761.6170	Other Equipment	Option 1	MFFF Construction - Installation/Materials	45,698
EAC 12-0768A	1774.7429	Distributables - Bulk Commodity - Stainless Steel Ball Valves	Option 1	MFFF Construction - Installation/Materials	1,603,495
EAC 12-0768A	1774.7434	Chemical Equipment	Option 1	MFFF Construction - Installation/Materials	294,652
EAC 12-0768A	1774.7438	Mechanical Equipment	Option 1	MFFF Construction - Installation/Materials	37,750,262
EAC 12-0768A	1774.7439	Consumable & Expendable Materials Specific to CP-27 – BAP Chemical P	Option 1	MFFF Construction - Installation/Materials	20,717,334
Subtotal					\$ 67,991,707
EAC 12-0768B	1751.5150	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	\$ 53,922
EAC 12-0768B	1752.5250	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	(52,926)
EAC 12-0768B	1754.5450	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	(996)
Subtotal					\$ -
EAC 12-0773A	1802.8820	Supplies & Services	Option 1	Hotel Load	\$ 1,812,630
Subtotal					\$ 1,812,630
EAC 12-0774B	0115.1504	Mechanical Programs	Base	Hotel Load	\$ 47,486
EAC 12-0774B	0115.1504	Mechanical Programs	Base		1,034,405
EAC 12-0774B	0115.1513	Plant MFFF Construction - Installation/Materials System	Base		450,617
EAC 12-0774B	1000.8006	Engineering Training	Option 1	Hotel Load	174,341
EAC 12-0774B	1001.8011	Business Travel	Option 1	Hotel Load	42,205
EAC 12-0774B	1001.8012	Temporary Assignments	Option 1	Hotel Load	221,219
EAC 12-0774B	1001.8019	Other ODCs	Option 1	Hotel Load	(1,691,356)
EAC 12-0774B	1003.8032	Civil / Structural	Option 1	MFFF Construction - Title III Engineering	318,356
EAC 12-0774B	1003.8032	Civil / Structural	Option 1	Hotel Load	955,412
EAC 12-0774B	1003.8034	Electrical / I&C Site Construction Support	Option 1	Hotel Load	1,308,749
EAC 12-0774B	1003.8035	Chemical-Construction Support	Option 1	Hotel Load	7,645
EAC 12-0774B	1003.8036	Mechanical – Construction Support	Option 1	Hotel Load	146,388
EAC 12-0774B	1003.8038	Engineering Mechanics - Site Construction Support	Option 1	Hotel Load	5,949,091
EAC 12-0774B	1004.8044	Electrical / I&C Procurement and Fabrication Support	Option 1	Hotel Load	37,044
EAC 12-0774B	1004.8046	Chemical-Procurement/Fabrication Support	Option 1	Hotel Load	230,243
EAC 12-0774B	1004.8049	Equipment Qualification	Option 1	Hotel Load	98,322
EAC 12-0774B	1005.8053	Electrical / IC Startup and Operations Support	Option 1	Hotel Load	29,240
EAC 12-0774B	1006.8052	Process Unit Responsible Engineer Startup Support	Option 1	Hotel Load	30,597
EAC 12-0774B	1212.8292	Commercial Grade Dedication (CGD)	Base	Hotel Load	2,071,902
EAC 12-0774B	1212.8293	Chemical/Mechanical Subcontract Technical Representatives (STRs) and	Base	Hotel Load	3,755,396
EAC 12-0774B	1212.8294	Electrical/I&C Procurements Engineering	Base	Hotel Load	2,720,741
Subtotal					\$ 17,938,043
EAC 12-0775A	1701.8701	KCB - Homogenization - Sampling	Option 1	Process Units	\$ (2,300)
EAC 12-0775A	1701.8702	KCC - PuO2 Decanning	Option 1	Process Units	(2,448)

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Trend ⁽¹⁾	Cost Account	Cost Account Description	Contract	Claim Category	2012 Rebaseline Addendum ⁽¹⁾
EAC 12-0775A	1701.8703	KDA - PUO2 Decanning	Option 1	Process Units	1,425,471
EAC 12-0775A	1701.8704	KDM - Pre-Polishing Milling	Option 1	Process Units	4,207,320
EAC 12-0775A	1701.8705	KDR - Recanning	Option 1	Process Units	(79)
EAC 12-0775A	1701.8706	KPA GB 4010	Option 1	Process Units	(110,492)
EAC 12-0775A	1701.8777	KPG - Sampling Automatic	Option 1	Process Units	736,722
EAC 12-0775A	1702.8707	KCB 5000 Manufacturing	Option 1	Process Units	(49,369)
EAC 12-0775A	1703.8715	DCM - PuO2 3013 Storage	Option 1	Process Units	910,079
EAC 12-0775A	1703.8716	DCP - PuO2 Receiving	Option 1	Process Units	735,048
EAC 12-0775A	1703.8717	KDA - PUO2 Decanning (EQ - 6000 Density Measurement)	Option 1	Process Units	102,015
EAC 12-0775A	1704.8720	SDK - Rod Inspection and Sorting	Option 1	Process Units	2,759
EAC 12-0775A	1704.8721	SEK - Helium Leak Test	Option 1	Process Units	220,756
EAC 12-0775A	1705.8722	GMK - Rod Tray Loading	Option 1	Process Units	35,886
EAC 12-0775A	1705.8723	SCE - Rod Scanning	Option 1	Process Units	156,557
EAC 12-0775A	1705.8724	SMK - Rod Tray Handling	Option 1	Process Units	437,502
EAC 12-0775A	1705.8725	STK - Rod Storage	Option 1	Process Units	204,924
EAC 12-0775A	1705.8726	SXE - X Ray Inspection	Option 1	Process Units	164,450
EAC 12-0775A	1705.8727	TAS - Assembly Handling and Storage	Option 1	Process Units	612,163
EAC 12-0775A	1705.8728	TCK - Assembly Dry Cleaning	Option 1	Process Units	(85,910)
EAC 12-0775A	1705.8729	TCL - Assembly Final Inspection	Option 1	Process Units	86,862
EAC 12-0775A	1705.8731	TCP - Assembly Dimensional Inspection	Option 1	Process Units	(8,584)
EAC 12-0775A	1705.8732	TGM - Assembly Mockup Loading	Option 1	Process Units	107,270
EAC 12-0775A	1705.8733	TGV - Assembly Mounting	Option 1	Process Units	55,824
EAC 12-0775A	1706.8734	PSE - Green Pellet Storage	Option 1	Process Units	(245,815)
EAC 12-0775A	1706.8735	PSF - Sintering Pellet Storage	Option 1	Process Units	(389,812)
EAC 12-0775A	1706.8736	PSI - Scrap Pellet Storage	Option 1	Process Units	(340,288)
EAC 12-0775A	1706.8737	PSJ - Ground & Sorted Pellet Storage	Option 1	Process Units	723,484
EAC 12-0775A	1707.8738	Lab Equip - LRD/LPG/LBT/LAC/KLN/KLL/KLK/KLH	Option 1	Process Units	985,833
EAC 12-0775A	1707.8739	Lab Equip - LME/LAU/FLT	Option 1	Process Units	550,206
EAC 12-0775A	1707.8740	Lab Equip - LSR/LCP/KLJ	Option 1	Process Units	1,944,369
EAC 12-0775A	1707.8741	Lab Equip - LPS/LET/LER/LDS/KLM/KLF/KLB/KLC/KLD	Option 1	Process Units	2,224,365
EAC 12-0775A	1707.8742	Lab Equip - KLO/KLI/KLG/KLA/KLE	Option 1	Process Units	1,411,224
EAC 12-0775A	1707.8744	Lab Equip - LFX	Option 1	Process Units	227,001
EAC 12-0775A	1708.8745	DCE - PUO2 Buffer Storage	Option 1	Process Units	834,042
EAC 12-0775A	1708.8746	GDE - Rod Decladding	Option 1	Process Units	938,414
EAC 12-0775A	1708.8747	GME - Rod Cladding and Decontamination	Option 1	Process Units	1,621,347
EAC 12-0775A	1708.8748	PAD - Preplanning	Option 1	Process Units	17,801
EAC 12-0775A	1708.8749	PAR - Preplanning	Option 1	Process Units	(15,095)
EAC 12-0775A	1708.8750	PML - Pellet Handling	Option 1	Process Units	3,107,163
EAC 12-0775A	1708.8751	PQE - Quality Control & Manual Sorting	Option 1	Process Units	3,235,272
EAC 12-0775A	1708.8752	PRE - Pellet Grinding	Option 1	Process Units	(16,839)
EAC 12-0775A	1708.8753	PRF - Pellet Grinding	Option 1	Process Units	337,726
EAC 12-0775A	1708.8754	PTE - Pellet Inspection & Sorting	Option 1	Process Units	(3,310)
EAC 12-0775A	1708.8755	PTF - Pellet Inspection & Sorting	Option 1	Process Units	296,665
EAC 12-0775A	1709.8756	DDP - UO2 Drum Emptying	Option 1	Process Units	709,672

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Trend ⁽¹⁾	Cost Account	Cost Account Description	Contract	Claim Category	2012 Rebaseline Addendum ⁽¹⁾
EAC 12-0775A	1709.8757	LCT - Test Line (part of laboratory)	Option 1	Process Units	454,130
EAC 12-0775A	1709.8758	NBX - Primary Blend Ball Milling	Option 1	Process Units	312,996
EAC 12-0775A	1709.8759	NBY - Scrap Ball Milling	Option 1	Process Units	567,828
EAC 12-0775A	1709.8760	NCR - Scrap Processing	Option 1	Process Units	2,469,813
EAC 12-0775A	1709.8761	NDD - PUO2 Can Receiving and Emptying	Option 1	Process Units	645,475
EAC 12-0775A	1709.8762	NDP - Primary Dosing	Option 1	Process Units	3,803,209
EAC 12-0775A	1709.8763	NDS - Final Dosing	Option 1	Process Units	4,364,668
EAC 12-0775A	1709.8764	NTM - Jar Storage and Handling	Option 1	Process Units	9,085,523
EAC 12-0775A	1709.8765	NXR - Powder Auxiliary	Option 1	Process Units	1,975,494
EAC 12-0775A	1710.8766	NPG - Homogenization & Pelletizing	Option 1	Process Units	1,184,650
EAC 12-0775A	1710.8767	NPH - Homogenization & Pelletizing	Option 1	Process Units	1,210,439
EAC 12-0775A	1710.8768	NPI - Homogenization & Pelletizing	Option 1	Process Units	(832)
EAC 12-0775A	1711.8769	KLA - Precipitation - Filtration - Oxidation	Option 1	Process Units	387,460
EAC 12-0775A	1711.8770	KCB GB1000 - Homogenization - Sampling	Option 1	Process Units	279,260
EAC 12-0775A	1711.8771	KDA - PUO2 Decanning	Option 1	Process Units	239,438
EAC 12-0775A	1711.8772	KDB - Dissolution	Option 1	Process Units	1,199,060
EAC 12-0775A	1711.8773	KDD - Dissolution of Chlorinated Feed	Option 1	Process Units	2,356,166
EAC 12-0775A	1711.8774	KDM - Pre-Polishing Milling (GB6400/7400)	Option 1	Process Units	375,657
EAC 12-0775A	1711.8775	KPA GB4000	Option 1	Process Units	882,101
EAC 12-0775A	1711.8776	KPB GB1000	Option 1	Process Units	368,014
EAC 12-0775A	1711.8778	LLP - Pneumatic Transfer (33mm, PUO2 cans) Equipment	Option 1	Process Units	539,478
EAC 12-0775A	1711.8779	LTP - Pneumatic Transfer (76mm, PUO2 cans) Equipment	Option 1	Process Units	162,870
EAC 12-0775A	1711.8780	NTP - Pneumatic Transfer (133mm, PUO2 cans) Equipment	Option 1	Process Units	273,997
EAC 12-0775A	1712.8782	PFE/PFF - Sintering Furnace	Option 1	Process Units	6,288,048
EAC 12-0775A	1712.8783	TXE - Assembly Packaging	Option 1	Process Units	68,235
EAC 12-0775A	1714.8708	KCD - Oxalic Mother Liquors Recovery Unit	Option 1	Process Units	(2,898)
EAC 12-0775A	1714.8709	KPA (GB2000, 2010, 3000, 8000, 8510) Purification Cycle	Option 1	Process Units	119,541
EAC 12-0775A	1714.8710	KPC - Nitric Acid Recovery Liquid Ring Pump GB	Option 1	Process Units	27,060
EAC 12-0775A	1714.8711	KWD - Aqueous Waste Reception	Option 1	Process Units	36,314
EAC 12-0775A	1714.8714	KPB (GB2000) Solvent Recovery Unit	Option 1	Process Units	28,505
EAC 12-0775A	1715.8719	VDT Waste Nuclear Count - Drum Hdling & NDA P	Option 1	Process Units	299,190
EAC 12-0775A	1716.8795	Long Lead Procurements	Option 1	Process Units	1,933,293
EAC 12-0775A	1717.8799	REA Exposure	Option 1	Process Units	(22,390,845)
Subtotal					\$ 47,639,186
EAC 12-0775B	1711.8769	KLA - Precipitation - Filtration - Oxidation	Option 1	Process Units	\$ (30,861)
EAC 12-0775B	1711.8772	KDB - Dissolution	Option 1	Process Units	(55,585)
EAC 12-0775B	1711.8773	KDD - Dissolution of Chlorinated Feed	Option 1	Process Units	(245,166)
EAC 12-0775B	1711.8778	LLP - Pneumatic Transfer (33mm, PUO2 cans) Equipment	Option 1	Process Units	(9,175)
EAC 12-0775B	1711.8779	LTP - Pneumatic Transfer (76mm, PUO2 cans) Equipment	Option 1	Process Units	(39,406)
EAC 12-0775B	1711.8780	NTP - Pneumatic Transfer (133mm, PUO2 cans) Equipment	Option 1	Process Units	(138,817)
Subtotal					\$ (519,010)
EAC 12-0775C	1711.8769	KLA - Precipitation - Filtration - Oxidation	Option 1	Process Units	\$ 1,071,086

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Trend ⁽¹⁾	Cost Account	Cost Account Description	Contract	Claim Category	2012 Rebaseline Addendum ⁽¹⁾
EAC 12-0775C	1711.8772	KDB - Dissolution	Option 1	Process Units	723,341
EAC 12-0775C	1711.8773	KDD - Dissolution of Chlorinated Feed	Option 1	Process Units	2,293,511
EAC 12-0775C	1711.8778	LLP - Pneumatic Transfer (33mm, PUO2 cans) Equipment	Option 1	Process Units	233,274
EAC 12-0775C	1711.8779	LTP - Pneumatic Transfer (76mm, PUO2 cans) Equipment	Option 1	Process Units	(16,846)
EAC 12-0775C	1711.8780	NTP - Pneumatic Transfer (133mm, PUO2 cans) Equipment	Option 1	Process Units	(436,338)
Subtotal					\$ 3,868,028
EAC 12-0779A	1600.8601	Management / Admin	Option 1	Process Units	\$ 1,273,387
EAC 12-0779A	1600.8602	Project Controls	Option 1	Process Units	611,276
EAC 12-0779A	1601.8611	Business Travel	Option 1	Process Units	601,395
Subtotal					\$ 2,486,058
EAC 12-0788	1901.6023	Quality Control Projects	Option 1	QA	\$ 2,869,622
Subtotal					\$ 2,869,622
EAC 12-0794	9009.0903	DOE Tech Spt. (Non-MOX Services Cost)	Option 1		\$ 547,917 ⁽²⁾
Subtotal					\$ 547,917
EAC 12-0807A	1737.3753	Mechanical / Piping	Option 1	MFFF Construction - Installation/Materials	\$ 150,046
Subtotal					\$ 150,046
Grand Total					\$ 285,916,668 ⁽³⁾

Sources:

(1) Change Log by Work Package Dec. 2012- June 2014

Notes:

- (1) Trends associated with the 2012 Rebaseline Addendum were identified by MOX Services personnel and described as related to the Addendum within the individual Trends and the Monthly Reports.
- (2) Trend EAC 12-0794 detail includes budgeted costs for FY 2013 in the amount of \$5,098,293 that was not incorporated into the Trend or loaded into PRISM.
- (3) The May 2013 Monthly Status Report notes "[t]he current EAC incorporates an additional \$291 million from the addendum to BCP 12-121..." The \$291 million appears to include \$5,098,293 for funding in FY 2013 for MA 90 from Trend EAC 12-0794 that was not loaded into PRISM or incorporated into the EAC.

CB&I AREVA MOX Services, LLC.

Schedule 7.1

MFFF Project Costs - Actual Costs Incurred Through April 2013 by Claim Category

REA Category	[A] Pre- June 2007	[B] June 2007 - September 2007	[C] FY 2008	[D] FY 2009	[E] FY 2010	[F] FY 2011	[G] FY 2012	[H] October 2012 - April 2013	[I] = A+B+...H Incurred Through April 2013	[J] = K-I ETC	[K] Total 2012 Rebaseline With Addendum
Option 1 Contract											
Process Units - Direct	\$ 918,474	\$ 695,325	\$ 19,046,873	\$ 33,430,128	\$ 120,992,571	\$ 143,623,473	\$ 151,913,503	\$ 65,831,787	\$ 536,452,134	\$ 322,339,279	\$ 858,791,412
Process Units - Hotel Load	36,554,031	29,231,850	96,710,540	85,207,267	96,487,076	141,995,362	141,488,442	79,253,959	706,928,527	905,718,163	1,612,646,690
MFFF Construction - Title III Engineering	4,515,776	2,901,113	4,454,500	8,029,507	21,552,571	22,968,776	15,785,577	6,286,341	86,494,160	4,770,991	91,265,151
MFFF Construction - Installation/Materials	44,148,438	12,876,563	64,433,116	110,285,436	130,585,370	178,077,370	302,358,477	130,728,248	973,493,018	1,230,657,479	2,204,150,497
Construction Management	4,154,454	2,950,780	9,927,064	11,194,232	12,399,847	13,354,039	21,698,947	12,756,179	88,435,542	126,149,719	214,585,261
Quality Assurance	-	-	-	12,103,757	16,372,563	17,847,543	22,046,431	10,381,395	78,751,690	90,127,878	168,879,568
All Other	32,983,125	5,952,013	17,639,918	25,318,305	20,505,309	15,621,001	16,161,353	11,216,615	145,397,639	268,035,163	413,432,801
Option 1 Subtotal	\$ 123,274,297	\$ 54,607,645	\$ 212,212,011	\$ 285,568,632	\$ 418,895,306	\$ 533,487,564	\$ 671,452,731	\$ 316,454,524	\$ 2,615,952,710	\$ 2,947,798,671	\$ 5,563,751,381
Base Contract	\$ 688,059,086	\$ 17,949,470	\$ 60,828,209	\$ 67,578,685	\$ 63,687,430	\$ 50,199,514	\$ 36,673,921	\$ 16,549,871	\$ 1,001,526,186	\$ 49,224,019	\$ 1,050,750,205
MFFF Project Total	\$ 811,333,382	\$ 72,557,114	\$ 273,040,220	\$ 353,147,317	\$ 482,582,736	\$ 583,687,078	\$ 708,126,652	\$ 333,004,396	\$ 3,617,478,895	\$ 2,997,022,690	\$ 6,614,501,585

Sources:

Schedule 7.11

Schedule 7.11

CB&IAREVA MOX Services, LLC.
MFFF Project Costs - Actual Costs Incurred Through April 2013 by Cost Account and Claim Category

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I] = A+B+...+H	[J] = K-I	[K]
				Pre-June 2007	June 2007 - September 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	October 2012 - April 2013	Subtotal Through April 2013	ETC	Total 2012 Rebaseline With Addendum
1003.8033	PUDC Procurement & Fabrication Support	Option 1	Process Units - Direct					2,053	15,556	94,402	89,135	201,146	10,889,173	11,010,319
1004.8043	PUDC Site Construction Support	Option 1	Process Units - Direct	42,032	6,847	(11,012)	1,983,773	5,718,978	5,673,180	7,126,201	3,023,927	23,563,925	14,525,148	38,089,073
1004.8045	Software	Option 1	Process Units - Direct	-	-	-	139,774	370,778	464,525	899,116	1,380,880	3,255,073	12,167,354	15,422,427
1005.8056	PUDC Startup Support	Option 1	Process Units - Direct	-	-	-	-	-	1,541	-	-	1,541	19,279,038	19,280,579
1600.8601	Management / Admin	Option 1	Process Units - Direct	119,976	184,825	864,715	1,322,008	1,411,349	1,043,873	1,385,513	518,868	6,851,126	2,975,250	9,826,376
1600.8602	Project Controls	Option 1	Process Units - Direct	82,657	89,389	488,611	1,158,329	1,230,369	1,052,788	1,819,071	927,270	6,848,484	2,593,262	9,441,747
1600.8603	QA / QC	Option 1	Process Units - Direct	108,426	(4,568)	3,119	(18,825)	-	-	-	(26)	88,126	26	88,152
1601.8611	Business Travel	Option 1	Process Units - Direct	39,185	16,697	65,220	144,539	832,062	1,455,734	1,594,181	534,675	4,682,292	915,997	5,597,889
1602.8621	Supervision / Admin	Option 1	Process Units - Direct	103,863	61,849	595,002	861,237	1,282,309	1,100,551	283,444	(3,061)	4,285,194	208,366	4,493,560
1603.8631	Supervision / Admin	Option 1	Process Units - Direct	422,335	337,611	1,525,812	619,679	1,269,555	788,030	564,728	190,269	5,718,020	1,373,503	7,091,522
1603.8632	Job Living Expense	Option 1	Process Units - Direct	-	-	-	-	-	54,258	141,080	12,846	208,184	210,391	418,575
1604.8641	Team Center Initiative	Option 1	Process Units - Direct	-	-	-	-	-	361,303	(52,059)	6,000	313,719	1,325	315,244
1605.8645	CA - NRC/CIGIE - PUDC Support	Option 1	Process Units - Direct	-	-	-	-	16,661	1,480,920	526,249	127,107	2,150,956	3,512,627	5,663,563
1618.8748	PAD - Preplanning	Option 1	Process Units - Direct	-	-	2,183	329	-	(2,512)	-	-	-	-	-
1618.8749	PAR - Preplanning	Option 1	Process Units - Direct	-	-	-	-	-	-	-	-	-	-	-
1623.8785	Process Assembly Facilities	Option 1	Process Units - Direct	-	2,676	14,298,293	3,020,514	3,463,832	3,058,447	2,671,269	1,039,189	27,554,220	5,880,659	33,434,879
1701.8701	KCB - Homogenization - Sampling	Option 1	Process Units - Direct	-	-	51,533	942,401	2,439,532	1,463,704	866,767	28,138	5,792,075	6,666,616	6,458,691
1701.8702	KCC - PuO2 Decanning	Option 1	Process Units - Direct	-	-	67,296	737,471	1,904,011	1,030,278	652,755	76,738	4,468,549	524,578	4,993,127
1701.8703	KDA - PuO2 Decanning	Option 1	Process Units - Direct	-	-	13,430	363,874	948,739	6,448,551	7,272,721	1,719,282	16,766,598	2,663,671	19,430,268
1701.8704	KDM - Pre-Polishing Milling	Option 1	Process Units - Direct	-	-	2,738	51,388	2,084,243	9,086,411	8,790,302	5,347,399	23,562,481	7,421,978	32,784,460
1701.8705	KDR - Recanning	Option 1	Process Units - Direct	-	-	2,738	(2,738)	17,212	156,470	13,393	(884)	186,191	32,020	218,211
1701.8706	KPA GB 4010	Option 1	Process Units - Direct	-	-	(37)	3,136	247,583	1,013,061	895,395	17,002	2,176,140	355,389	2,531,529
1701.8777	KPG - Sampling Automatic	Option 1	Process Units - Direct	-	-	-	-	120,489	2,960,179	1,795,669	333,137	5,209,474	1,741,018	6,950,492
1701.8796	KCB 5000 Manufacturing	Option 1	Process Units - Direct	-	-	-	-	-	-	-	-	-	-	-
1702.8707	VDR - Filter Dismantling	Option 1	Process Units - Direct	-	-	-	-	976	28,405	151,386	296,992	477,760	173,009	650,769
1702.8712	VDU - Maintenance & Mechanical Dismantling	Option 1	Process Units - Direct	-	-	-	2,136	28,414	1,021	(443)	(428)	30,701	30,732	61,433
1702.8713	VDU - Maintenance & Mechanical Dismantling	Option 1	Process Units - Direct	-	-	-	-	21,967	(869)	(829)	(280)	19,989	280	20,269
1703.8715	DCM - PuO2 3013 Storage	Option 1	Process Units - Direct	-	-	-	-	36,600	1,159,950	349,568	269,573	1,815,690	5,204,827	7,020,517
1703.8716	DCP - PuO2 Receiving	Option 1	Process Units - Direct	-	-	-	-	-	5,434	1,174,691	2,408,384	3,588,509	2,701,763	6,290,272
1703.8717	KDA - PuO2 Decanning (EQ - 6000 Density Measurement)	Option 1	Process Units - Direct	-	-	-	-	1,218	142,128	590,918	68,740	803,004	1,177	804,180
1704.8720	SDK - Rod Inspection and Sorting	Option 1	Process Units - Direct	-	-	54,677	512,787	1,663,616	(2,309)	96,704	121,938	2,447,411	(74,400)	2,373,011
1704.8721	SEK - Helium Leak Test	Option 1	Process Units - Direct	-	-	64,900	287,559	977,984	100,261	13,233	206,382	1,650,320	86,888	1,737,208
1705.8722	GMK - Rod Tray Loading	Option 1	Process Units - Direct	-	-	-	-	38,405	849,198	150,514	4,652	1,042,768	119,622	1,162,390
1705.8723	SCE - Rod Scanning	Option 1	Process Units - Direct	-	-	-	-	-	404,528	2,011,586	671,107	3,087,221	337,638	3,424,860
1705.8724	SMK - Rod Tray Handling	Option 1	Process Units - Direct	-	-	-	-	11,222	161,394	1,295,141	1,974,422	513,746	2,488,168	2,999,914
1705.8725	STK - Rod Storage	Option 1	Process Units - Direct	-	-	-	62,497	3,288,870	393,155	275,805	6,185	4,058,511	199,767	4,258,278
1705.8726	SXE - X Ray Inspection	Option 1	Process Units - Direct	-	-	-	-	-	8,526	249,415	257,888	515,830	1,849,588	2,365,417
1705.8727	TAS - Assembly Handling and Storage	Option 1	Process Units - Direct	-	-	-	-	-	6,565	345,590	644,168	996,323	8,361,900	9,358,223
1705.8728	TCK - Assembly Dry Cleaning	Option 1	Process Units - Direct	-	-	-	-	-	53,758	198,714	181,480	433,952	312,029	745,981
1705.8729	TCL - Assembly Final Inspection	Option 1	Process Units - Direct	-	-	-	-	-	87,513	824,488	136,769	1,048,771	226,250	1,275,021
1705.8730	TGJ - Reserve Pit	Option 1	Process Units - Direct	-	-	-	-	-	28,235	229,499	91,209	348,943	9,478	358,421
1705.8731	TCP - Assembly Dimensional Inspection	Option 1	Process Units - Direct	-	-	-	-	-	148,647	1,385,208	459,264	1,993,120	94,675	2,087,795
1705.8732	TGM - Assembly Mockup Loading	Option 1	Process Units - Direct	-	-	-	-	-	231,471	1,763,759	370,797	2,366,027	529,985	2,896,012
1705.8733	TGV - Assembly Mounting	Option 1	Process Units - Direct	-	-	-	-	-	44,919	485,456	8,363	538,737	278,534	817,271
1706.8734	PSE - Green Pellet Storage	Option 1	Process Units - Direct	-	-	22,405	1,742,882	3,035,303	1,641,668	690,574	204,661	7,337,492	387,797	7,725,288
1706.8735	PSF - Sintering Pellet Storage	Option 1	Process Units - Direct	-	-	11,473	1,407,796	3,653,646	1,448,589	566,745	60,616	7,148,865	396,224	7,545,089
1706.8736	PSI - Scrap Pellet Storage	Option 1	Process Units - Direct	-	-	77,316	1,731,389	5,121,189	464,155	560,768	130,546	8,885,365	240,715	8,326,080
1706.8737	PSJ - Ground & Sorted Pellet Storage	Option 1	Process Units - Direct	-	-	15,511	1,410,686	1,579,534	2,706,540	2,221,441	17,180	7,950,893	749,759	8,700,651
1707.8738	Lab Equip - LRD/LPG/LBT/LAC/KLN/KLL/KLK/KLH	Option 1	Process Units - Direct	-	-	-	-	-	204,212	2,191,771	126,668	2,522,651	6,747,090	9,269,740
1707.8739	Lab Equip - LME/LAU/FLT	Option 1	Process Units - Direct	-	-	-	-	314,044	348,355	1,355,560	239,353	2,311,311	3,193,842	5,505,154
1707.8740	Lab Equip - LSR/LCP/KLJ	Option 1	Process Units - Direct	-	-	-	-	-	1,565,951	4,854,637	103,231	6,523,819	4,334,614	10,858,433
1707.8741	Lab Equip - LPS/LET/LER/LDS/KLM/KLF/KLB/KLC/KLD	Option 1	Process Units - Direct	-	-	-	-	-	43,561	2,886,183	278,719	3,208,463	9,799,993	13,008,455
1707.8742	Lab Equip - KLO/KLL/KLG/KLA/KLE	Option 1	Process Units - Direct	-	-	-	-	-	85,233	1,899,283	390,859	2,375,376	7,950,025	10,325,401
1707.8743	Lab Equip - LSG/LLI	Option 1	Process Units - Direct	-	-	-	-	-	16,643	1,761	0	18,404	622,926	641,331
1707.8744	Lab Equip - LFX	Option 1	Process Units - Direct	-	-	-	-	-	-	191,328	224,557	415,884	1,952,826	2,368,710
1708.8745	DCE - PuO2 Buffer Storage	Option 1	Process Units - Direct	-	-	-	-	83,810	1,245,834	533,191	1,814,877	3,677,713	8,184,832	11,862,545
1708.8746	GDE - Rod Decadding	Option 1	Process Units - Direct	-	-	21,447	1,960	70,446	1,181,700	1,014,736	781,723	3,072,013	706,100	3,778,013
1708.8747	GME - Rod Cladding and Decontamination	Option 1	Process Units - Direct	-	-	81,029	872,425	7,354,050	5,588,354	1,427,638	22,990,148	26,508,618	3,518,465	30,027,083
1708.8748	PAD - Preplanning	Option 1	Process Units - Direct	-	-	90,827	1,351,410	427,827	193,526	51,408	(8,166)	2,106,833	7,714	2,114,547
1708.8749	PAR - Preplanning	Option 1	Process Units - Direct	-	-	75,960	1,407,443	437,470	129,747	10,635	(36,441)	2,024,815	21,627	2,046,442
1708.8750	PML - Pellet Handling	Option 1	Process Units - Direct	-	-	15,830	346,833	842,014	9,162,800	5,919,898	198,598	16,485,973	10,044,237	26,530,210
1708.8751	PQE - Quality Control & Manual Sorting	Option 1	Process Units - Direct	-	-	-	1,979	35,391	1,612,888	1,425,297	500,379	3,575,934	3,856,820	7,432,755
1708.8752	PRE - Pellet Grinding	Option 1	Process Units - Direct	-	-	17,522	32,619	1,321,260	1,810,198	2,426,029	542,296	6,149,924	891,067	7,040,991
1708.8753	PRF - Pellet Grinding	Option 1	Process Units - Direct	-	-	-	11,859	1,153,172	1,710,318	2,244,746	150,673	5,270,768	1,656,043	6,926,812
1708.8754	PTF - Pellet Inspection & Sorting	Option 1	Process Units - Direct	-	-	15,356	21,319	1,835,993	380,798	1,627,799	1,116,633	4,997,897	808,177	5,806,075
1708.8755	PTF - Pellet Inspection & Sorting	Option 1	Process Units - Direct	-	-	192	10,046	1,767,096	306,053	1,551,121	776,134	4,410,641	1,283,145	5,693,786

Schedule 7.11

CB&IAREVA MOX Services, LLC.
MFFF Project Costs - Actual Costs Incurred Through April 2013 by Cost Account and Claim Category

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I] = A+B+...+H	[J] = K-I	[K]
				Pre-June 2007	June 2007 - September 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	October 2012 - April 2013	Subtotal Through April 2013	ETC	Total 2012 Rebaseline With Addendum
1709.8756	DOP - UO2 Drum Emptying	Option 1	Process Units - Direct	-	-	27,625	4,338	234,446	915,228	904,794	244,488	2,330,920	527,313	2,388,233
1709.8757	LCT - Test Line (part of laboratory)	Option 1	Process Units - Direct	-	-	1,842	-	259,914	644,083	821,750	113,333	1,842,022	1,232,628	3,074,651
1709.8758	NBX - Primary Blend Ball Milling	Option 1	Process Units - Direct	-	-	40,273	293,200	1,089,098	820,500	641,835	15,938	2,900,865	916,318	3,817,183
1709.8759	NBY - Scrap Ball Milling	Option 1	Process Units - Direct	-	-	40,961	297,150	919,085	649,604	297,517	(65,044)	2,139,273	1,094,398	3,233,671
1709.8760	NCR - Scrap Processing	Option 1	Process Units - Direct	-	-	2,892	335	512,247	2,261,887	1,430,464	832,279	5,040,104	3,995,129	9,035,233
1709.8761	NDD - PUO2 Can Receiving and Emptying	Option 1	Process Units - Direct	-	-	-	7,223	260,984	936,572	1,215,526	370,904	2,791,209	1,012,556	3,803,765
1709.8762	NDP - Primary Dosing	Option 1	Process Units - Direct	-	-	2,892	91,753	3,046,721	2,384,138	521,227	939,763	6,986,495	5,191,021	12,177,516
1709.8763	NDS - Final Dosing	Option 1	Process Units - Direct	-	-	2,892	13,168	3,174,872	2,387,831	935,050	1,349,103	7,862,917	7,362,746	15,225,662
1709.8764	NTM - Jar Storage and Handling	Option 1	Process Units - Direct	-	-	-	42,239	5,824,021	8,032,842	1,001,634	1,821,209	16,721,944	10,339,646	27,061,590
1709.8765	NXR - Powder Auxiliary	Option 1	Process Units - Direct	-	-	2,892	18,933	1,721,741	1,617,701	719,426	305,741	4,386,435	2,554,245	6,940,680
1710.8766	NPG - Homogenization & Pelletizing	Option 1	Process Units - Direct	-	-	138,010	973,246	4,721,379	3,699,146	2,693,515	798,574	13,023,870	1,383,756	14,407,626
1710.8767	NPH - Homogenization & Pelletizing	Option 1	Process Units - Direct	-	-	65,713	963,980	4,564,972	3,406,053	1,937,504	409,303	11,347,524	2,611,606	13,959,131
1710.8768	NPI - Homogenization & Pelletizing	Option 1	Process Units - Direct	-	-	65,634	959,784	1,519,357	(231,826)	21	(38)	2,312,832	(795)	2,312,037
1711.8769	KLA - Precipitation - Filtration - Oxidator	Option 1	Process Units - Direct	-	-	-	110,460	1,185,656	1,032,928	2,484,571	1,856,290	6,670,047	1,850,799	8,520,845
1711.8770	KCB GB1000 - Homogenization - Sampling	Option 1	Process Units - Direct	-	-	112,936	703,702	1,200,570	222,856	134,071	21,468	2,395,603	284,138	2,679,741
1711.8771	KDA - PUO2 Decanning	Option 1	Process Units - Direct	-	-	2,738	3,755	47,779	373,813	197,821	40,903	666,810	331,681	998,491
1711.8772	KDB - Dissolution	Option 1	Process Units - Direct	-	-	-	45,088	1,054,567	747,502	1,344,794	1,685,836	4,877,787	4,714,099	9,591,887
1711.8773	KDD - Dissolution of Chlorinated Feed	Option 1	Process Units - Direct	-	-	-	192,398	2,475,857	2,275,245	5,753,909	3,645,705	14,343,114	6,235,452	20,578,565
1711.8774	KDM - Pre-Polishing Milling (GB400/7400)	Option 1	Process Units - Direct	-	-	5,482	(5,482)	53,809	490,361	202,858	33,297	782,326	598,266	1,380,592
1711.8775	KPA GB4000	Option 1	Process Units - Direct	-	-	-	130,154	901,108	295,155	388,022	1,215,512	2,929,951	448,795	3,378,746
1711.8776	KPB GB1000	Option 1	Process Units - Direct	-	-	-	116,025	502,351	208,945	220,806	142,497	1,190,624	587,197	1,777,821
1711.8777	KPG - Sampling Automatic	Option 1	Process Units - Direct	-	-	-	4,863	466,904	(416,513)	-	(1,954)	53,300	1,954	55,253
1711.8778	LLP - Pneumatic Transfer (33mm, PUO2 cans) Equipment	Option 1	Process Units - Direct	-	-	-	23,558	579,967	1,583,018	1,928,114	929,923	5,044,580	1,807,455	6,852,035
1711.8779	LTP - Pneumatic Transfer (76mm, PUO2 cans) Equipment	Option 1	Process Units - Direct	-	-	-	9,341	420,136	689,307	1,245,549	348,828	2,713,161	1,692,504	4,405,665
1711.8780	NTP - Pneumatic Transfer (133mm, PUO2 cans) Equipment	Option 1	Process Units - Direct	-	-	-	76,528	937,870	942,367	1,574,897	723,430	4,255,313	2,418,295	6,673,608
1712.8781	NPP - Additives Preparation	Option 1	Process Units - Direct	-	-	-	-	-	-	-	-	-	1,161,650	1,161,650
1712.8782	PFE/PFF - Sintering Furnace	Option 1	Process Units - Direct	-	-	-	385,958	2,164,021	12,552,858	14,176,106	8,783,711	38,062,654	33,410,309	71,472,962
1712.8783	TXE - Assembly Packaging	Option 1	Process Units - Direct	-	-	-	-	141,146	28,130	584,778	428,466	1,182,520	302,057	1,484,577
1712.8784	DRS - UO2 Receiving and Storage	Option 1	Process Units - Direct	-	-	-	-	-	-	-	-	-	-	-
1712.8786	PFF - Sintering Furnace	Option 1	Process Units - Direct	-	-	-	-	-	-	-	-	-	-	-
1713.8790	Process Unit Support	Option 1	Process Units - Direct	-	-	-	80,512	967,014	758,608	756,057	619,508	3,181,700	3,057,542	6,239,241
1713.8791	Assembly Suspense Accounts	Option 1	Process Units - Direct	-	-	-	-	-	-	-	-	-	-	-
1714.8708	KCD - Oxalic Mother Liquors Recovery Unit	Option 1	Process Units - Direct	-	-	-	-	-	808	352,800	(87,816)	265,792	476,873	742,665
1714.8709	KFA (GR2000, 2010, 3000, 8000, 8510) Purification Cycle	Option 1	Process Units - Direct	-	-	-	-	-	33,140	1,222,154	331,222	1,586,515	1,687,442	3,273,958
1714.8710	KPC - Nitric Acid Recovery Liquid Ring Pump GE	Option 1	Process Units - Direct	-	-	-	-	183	3,969	282,496	66,982	353,750	415,731	769,481
1714.8711	KWD - Aqueous Waste Reception	Option 1	Process Units - Direct	-	-	-	-	-	61	423,188	151,844	575,093	701,734	1,276,827
1714.8714	KPB (GR2000) Solvent Recovery Unit	Option 1	Process Units - Direct	-	-	-	-	-	11,227	248,249	(1,822)	257,705	306,494	564,199
1715.8716	DCP - PuO2 Receiving	Option 1	Process Units - Direct	-	-	-	157,000	-	-	-	-	157,000	-	157,000
1715.8718	VDQ Waste Storage	Option 1	Process Units - Direct	-	-	-	-	639	-	-	0	639	(0)	639
1715.8719	VDT Waste Nuclear Count - Drum Hdling & NDA P	Option 1	Process Units - Direct	-	-	-	-	-	-	922,547	43,866	966,413	3,501,594	4,468,007
1716.8791	Assembly BOAs Accounts	Option 1	Process Units - Direct	-	-	-	2,762,530	3,988,670	6,367,031	6,997,751	4,845,314	24,961,298	25,312,713	50,274,011
1716.8795	Long Lead Procurements	Option 1	Process Units - Direct	-	-	-	2,377,522	16,505,417	11,411,356	8,068,228	1,182,020	39,544,542	9,561,132	49,105,674
1716.8796	ATG Spares Procurements	Option 1	Process Units - Direct	-	-	-	-	79,505	28,157	171,604	313,971	593,236	4,594,237	5,187,473
1717.8792	Self-Perform Suspense Accounts	Option 1	Process Units - Direct	-	-	-	48,355	319,474	40,319	73,550	7,087	488,785	237,406	726,190
1717.8793	Design Modifications	Option 1	Process Units - Direct	-	-	-	-	268,790	104,223	-	(3,108)	369,905	3,108	373,013
1717.8797	Unexpected Outsource Costs	Option 1	Process Units - Direct	-	-	-	-	99,733	60,394	118,537	127,741	366,406	(173,519)	192,886
1717.8798	Duty and Shipping Costs	Option 1	Process Units - Direct	-	-	-	-	-	12,746	24,179	7,991	44,916	2,416,311	2,461,227
1717.8799	REA Exposure	Option 1	Process Units - Direct	-	-	-	-	-	-	-	(0)	(0)	0	-
1717.87MA	Maintenance Program, Layup/In-Storage	Option 1	Process Units - Direct	-	-	-	-	-	169,890	93,338	70,228	333,456	6,622	340,078
1745.4540	MP Powder & Pellets	Option 1	Process Units - Direct	-	-	-	4	(4)	-	-	-	-	-	-
1745.4550	MP Pellet Storage	Option 1	Process Units - Direct	-	-	-	-	-	-	-	-	-	-	-
1745.4570	MP Rods & Assemblies	Option 1	Process Units - Direct	-	-	-	-	-	-	-	-	-	-	-
1757.5720	AP Mechanical Units	Option 1	Process Units - Direct	-	-	-	-	-	-	-	-	-	-	-
Process Units - Direct Total				\$ 918,474	\$ 695,325	\$ 19,046,873	\$ 33,430,128	\$ 120,992,571	\$ 143,623,473	\$ 151,913,503	\$ 65,831,787	\$ 536,452,134	\$ 322,339,279	\$ 858,791,412
0601.6000	Project Office Operations	Option 1	Process Units - Hotel Load	\$ 1,464,941	\$ 575,336	\$ 1,368,659	\$ 616,828	\$ 580,241	\$ 652,322	\$ 678,495	\$ 257,805	\$ 6,194,627	\$ 3,030,437	\$ 9,225,064
0601.6001	Communications	Option 1	Process Units - Hotel Load	214,671	(49,747)	332,278	394,986	436,916	305,145	512,692	296,272	2,443,214	4,693,842	7,137,056
0601.6002	Special Projects	Option 1	Process Units - Hotel Load	209,586	274,047	1,224,296	567,946	786,448	705,175	922,801	787,878	5,528,176	4,467,094	9,995,270
0601.6003	Employee Incentive Program	Option 1	Process Units - Hotel Load	-	-	113	-	-	-	-	-	113	-	113
0601.6004	Project Off-Site Operations	Option 1	Process Units - Hotel Load	-	-	905,842	1,479,436	1,388,296	1,330,449	1,159,284	576,300	6,839,606	4,166,527	11,006,133
0601.6005	Projects Oversight	Option 1	Process Units - Hotel Load	-	-	779,751	1,169,400	917,943	2,457,448	753,448	8,176,145	8,176,149	16,667,313	16,667,313
0601.6009	Relocations	Option 1	Process Units - Hotel Load	863,111	1,814,276	6,763,592	4,712,641	8,789,984	2,123,036	2,732,590	1,156,729	28,955,960	9,930,120	38,306,079
0602.6010	Project Controls	Option 1	Process Units - Hotel Load	2,292,769	1,217,492	3,451,297	3,992,583	5,443,116	4,793,403	4,312,971	1,546,472	27,000,104	15,420,448	42,470,552
0602.6011	Risk Management	Option 1	Process Units - Hotel Load	173,642	85,943	186,079	303,433	2,073	409	-	401	753,980	(401)	753,578
0603.6020	QA Program Management & Administration	Option 1	Process Units - Hotel Load	210,098	283,208	886,746	56,276	971	-	-	(1,659)	1,435,640	1,659	1,437,299
0603.6021	Quality Engineering	Option 1	Process Units - Hotel Load	388,987	348,263	1,890,704	233,679	(126)	-	-	(4,133)	2,857,374	4,133	2,861,506

Schedule 7.11

CB&IAREVA MOX Services, LLC.
MFFF Project Costs - Actual Costs Incurred Through April 2013 by Cost Account and Claim Category

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I] = A+B+...+H	[J] = K-L	[K]
				Pre-June 2007	June 2007 - September 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	October 2012 - April 2013	Subtotal Through April 2013	ETC	Total 2012 Rebaseline With Addendum
0603.6022	Audit & Surveillance	Option 1	Process Units - Hotel Load	135,495	192,296	1,014,218	20,685	334	-	-	(1,979)	1,361,048	1,979	1,363,028
0603.6023	Quality Control - Labor	Option 1	Process Units - Hotel Load	173,426	397,175	1,832,738	(2,936)	-	-	-	(6,978)	2,393,425	6,978	2,400,403
0603.6024	QA / QC Assembly Group Support	Option 1	Process Units - Hotel Load	-	26,510	507,100	3,343	-	-	-	(239)	536,714	239	536,953
0603.6025	MOX Potential Back Charges	Option 1	Process Units - Hotel Load	-	-	220,728	1,797	1	-	-	(17)	222,509	17	222,526
0604.6030	PS&A Administrative Support	Option 1	Process Units - Hotel Load	128,264	221,375	2,567,047	4,093,712	3,107,578	3,866,104	4,439,332	2,764,116	21,187,528	19,107,439	40,294,967
0604.6031	Human Resources	Option 1	Process Units - Hotel Load	904,789	3,483,753	7,257,833	7,248,788	2,229,108	348,134	408,934	124,087	22,005,425	3,206,413	25,211,837
0604.6032	Training	Option 1	Process Units - Hotel Load	431,930	338,660	1,132,238	1,044,162	1,079,755	1,089,877	1,329,940	874,330	7,320,892	13,221,314	20,542,206
0604.6033	Information and Personnel Security	Option 1	Process Units - Hotel Load	353,154	220,053	791,613	838,491	929,880	1,178,660	1,467,891	680,105	6,459,847	12,115,783	18,575,630
0604.6034	Record Center	Option 1	Process Units - Hotel Load	311,441	172,826	679,337	958,620	1,356,635	1,484,706	1,474,079	705,393	7,143,037	7,248,121	14,391,158
0604.6035	Internal Communication	Option 1	Process Units - Hotel Load	65,198	50,584	9,886	9,301	-	-	-	-	134,969	-	134,969
0604.6036	Accounting, Treasury & Invoice Operations	Option 1	Process Units - Hotel Load	975,847	578,692	1,714,245	1,540,238	1,966,975	1,862,212	1,962,063	918,751	11,519,022	13,058,374	24,577,396
0604.6037	Asset Management	Option 1	Process Units - Hotel Load	365,002	(5,086)	(76)	(124)	-	(4,153)	-	(4,153)	355,562	4,153	355,715
0604.6038	Facility Management	Option 1	Process Units - Hotel Load	2,161,593	992,613	2,215,452	1,447,344	1,702,740	1,886,575	2,200,712	1,345,738	13,952,766	8,249,414	22,202,181
0604.6039	Facility - Mini-MAC Building	Option 1	Process Units - Hotel Load	-	-	(4,379)	-	-	-	-	(1,376)	123,125	1,376	123,501
0604.6042	PERCS	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	60,581	60,581	758,051	818,632
0604.6045	Gateway Project	Option 1	Process Units - Hotel Load	-	-	31,011	348,273	322,141	36,766	(3,945)	(4,399)	729,887	8,483	738,370
0604.6046	Shaw Nuclear Exchange	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
0604.6047	Legal Expenses	Option 1	Process Units - Hotel Load	-	-	293,087	938,116	572,878	1,170,660	1,401,333	749,150	5,125,224	10,380,752	15,505,975
0604.6048	EMC Corporation Matter	Option 1	Process Units - Hotel Load	-	-	-	1,556	-	1	-	0	1,557	(0)	1,557
0604.6049	952.204-77 Comp Security	Option 1	Process Units - Hotel Load	-	-	-	873	(174)	-	-	(28)	671	28	699
0605.6040	Contract Management & Administration	Option 1	Process Units - Hotel Load	1,464,466	461,248	1,511,781	1,316,102	1,516,103	1,707,280	2,023,165	763,436	10,763,580	7,805,853	18,569,434
0606.6050	Procurement	Option 1	Process Units - Hotel Load	381,335	292,303	1,061,248	1,087,643	1,309,530	833,408	788,176	341,692	6,095,336	2,714,301	8,809,637
0606.6051	Infrastructure Procurement	Option 1	Process Units - Hotel Load	285,482	164,984	639,465	651,568	632,767	689,713	602,664	218,698	3,885,341	2,256,386	6,141,727
0606.6052	Construction Procurement	Option 1	Process Units - Hotel Load	416,970	356,333	1,365,163	1,505,684	1,711,512	1,142,818	1,238,870	61,092	8,298,642	6,537,750	14,836,392
0606.6053	Process Equipment Procurement	Option 1	Process Units - Hotel Load	359,153	270,763	923,090	1,454,274	1,774,537	1,901,781	1,466,537	1,144,793	9,294,947	7,388,891	16,683,837
0606.6054	Process Unit Procurement	Option 1	Process Units - Hotel Load	154,747	257,995	52,194	-	-	-	-	7,489	472,424	(7,489)	464,936
0606.6055	Property Management	Option 1	Process Units - Hotel Load	-	-	-	388,714	416,823	441,448	6,019	172,813	1,425,817	3,909,430	5,335,247
0606.6056	Employment Eligibility Verifications	Option 1	Process Units - Hotel Load	-	-	-	851	-	-	-	0	851	(0)	851
0606.6057	Engineered Equipment Group	Option 1	Process Units - Hotel Load	-	-	-	-	503,387	1,038,566	1,213,621	569,803	3,325,377	4,931,615	8,256,992
0606.6058	Procurement Corrective Action NRC Commercial Grade Dedication	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
0606.6059	Procurement Support Services	Option 1	Process Units - Hotel Load	-	-	-	-	-	798,736	970,322	439,990	2,209,048	2,751,051	4,960,099
0606.6068	S&R and Warehouses	Option 1	Process Units - Hotel Load	-	-	-	-	-	2,003,616	6,887,627	3,489,481	12,380,724	19,297,574	31,678,298
0606.6069	Materials Management	Option 1	Process Units - Hotel Load	-	-	-	-	-	792,085	920,461	508,223	2,220,770	3,721,422	5,942,192
0607.6060	IT Support	Option 1	Process Units - Hotel Load	1,994,322	1,452,819	1,800,494	2,886,424	3,610,346	3,832,770	5,132,869	2,078,036	22,788,081	25,141,396	47,929,477
0607.6061	IT Other Direct Costs (ODCs)	Option 1	Process Units - Hotel Load	1,588,135	1,098,190	5,300,176	4,875,309	4,619,886	3,807,641	4,095,086	2,605,158	27,989,582	29,893,623	57,883,204
0607.6062	Team Center Initiative	Option 1	Process Units - Hotel Load	-	-	497,507	1,086,021	533,788	(1,129)	-	(5,772)	2,110,416	5,772	2,116,187
0611.6000	Project Office Operations	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
0611.6001	Communications	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
0611.6002	Special Projects	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
0611.6004	Project Off-Site Operations	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
0611.6005	Projects Oversight	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
0611.6009	Relocations	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
0611.6090	Project Systems Assessment - NNSA (OPC)	Option 1	Process Units - Hotel Load	-	-	-	-	239,770	-	-	-	239,770	-	239,770
0611.6091	EVMS Process Improvements Development ODC (OPC)	Option 1	Process Units - Hotel Load	-	-	-	-	-	0	-	-	0	18,475	18,475
0612.6010	Project Controls	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
0614.6030	Program Support and Legal Administration	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
0614.6031	Human Resources	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
0614.6032	Training	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
0614.6034	Record Center	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
0614.6036	Accounting, Treasury & Invoice Operations	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
0614.6038	Facility Management	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
0614.6047	Legal Expenses	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
0615.6040	Contract Management & Administration	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
0616.6050	Procurement	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
0616.6051	Infrastructure Procurement	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
0616.6052	Construction Procurement	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
0616.6053	Process Equipment Procurement	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
0616.6055	Property Management	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
0616.6057	Engineered Equipment Group	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
0616.6059	Procurement Support Services	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
0616.6068	S&R and Warehouses	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
0616.6069	Materials Management	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
0617.6060	IT Support	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
0617.6061	IT Other Direct Costs (ODCs)	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
MA 06 - Subtotal				\$ 18,468,553	\$ 15,700,983	\$ 51,202,554	\$ 47,274,035	\$ 48,482,182	\$ 44,285,541	\$ 52,802,037	\$ 26,467,566	\$ 304,683,453	\$ 299,409,835	\$ 604,093,287
1000.8001	Management / Admin	Option 1	Process Units - Hotel Load	343,953	222,384	770,718	923,832	1,311,871	1,517,077	2,840,864	1,672,490	9,603,190	11,227,997	20,831,188

Schedule 7.11

CB&IAREVA MOX Services, LLC.
MFFF Project Costs - Actual Costs Incurred Through April 2013 by Cost Account and Claim Category

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I] = A+B+...+H	[J] = K-I	[K]
				Pre-June 2007	June 2007 - September 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	October 2012 - April 2013	Subtotal Through April 2013	ETC	Total 2012 Rebaseline With Addendum
1000.8002	Engineering Services Project Controls	Option 1	Process Units - Hotel Load	765,046	449,939	1,268,722	1,100,696	975,812	864,481	778,791	401,253	6,604,740	2,943,275	9,548,015
1000.8003	Engineering Assurance	Option 1	Process Units - Hotel Load	569,105	263,728	846,235	799,646	933,599	900,179	849,234	433,168	5,594,895	3,052,767	8,647,662
1000.8004	Technical Coordination	Option 1	Process Units - Hotel Load	307,857	263,194	926,217	734,737	663,100	680,479	492,921	168,781	4,237,287	2,290,678	6,527,963
1000.8005	Document Management	Option 1	Process Units - Hotel Load	211,687	87,155	269,440	355,992	366,648	423,794	426,941	226,562	2,368,219	1,623,734	3,991,953
1000.8006	Engineering Training	Option 1	Process Units - Hotel Load	-	-	1,622,596	1,673,510	2,387,174	1,433,214	1,529,681	672,568	9,318,743	1,340,093	10,658,836
1001.8011	Business Travel	Option 1	Process Units - Hotel Load	-	-	240,221	374,365	725,228	592,055	849,137	505,964	3,286,972	713,025	3,999,996
1001.8012	Temporary Assignments	Option 1	Process Units - Hotel Load	139,159	260,025	12,876	-	374,186	3,124,864	3,257,906	1,077,897	8,246,914	2,253,809	10,500,723
1001.8019	Other ODCs	Option 1	Process Units - Hotel Load	-	-	200,238	1,236,927	486,063	1,103,469	1,091,984	350,576	4,469,257	3,150,833	7,620,090
1002.8021	Supervision / Admin	Option 1	Process Units - Hotel Load	296,516	153,616	457,341	295,088	116,701	30,359	-	(2,457)	1,347,164	2,457	1,349,621
1002.8022	Chemical	Option 1	Process Units - Hotel Load	-	-	476,566	4,901	(5,638)	(38)	-	-	475,791	-	475,791
1002.8023	Mechanical	Option 1	Process Units - Hotel Load	-	-	13,263	-	(180)	-	-	-	13,083	-	13,083
1002.8024	Laboratory	Option 1	Process Units - Hotel Load	-	-	61,387	-	(758)	-	-	-	60,629	-	60,629
1002.8025	Balance of Plant (BOP)	Option 1	Process Units - Hotel Load	-	-	38,427	-	(93)	-	-	-	37,924	-	37,924
1002.8026	Safety	Option 1	Process Units - Hotel Load	-	-	73,960	(115)	(831)	-	-	-	73,015	-	73,015
1002.8027	Reference Plant Support	Option 1	Process Units - Hotel Load	-	-	71,548	(84)	34,512	-	-	-	105,977	-	105,977
1003.8031	Supervision / Admin	Option 1	Process Units - Hotel Load	-	-	1,025,644	1,085,954	1,283,788	1,129,074	12,731	(51,030)	4,486,162	51,030	4,537,192
1003.8032	Civil / Structural	Option 1	Process Units - Hotel Load	-	138	540,828	1,160,272	3,274,903	7,594,224	9,426,898	5,713,670	27,710,933	12,664,197	40,375,130
1003.8034	Electrical / I&C Site Construction Support	Option 1	Process Units - Hotel Load	-	-	599,696	1,048,553	924,328	2,025,615	2,367,496	791,498	7,757,185	21,426,148	29,183,333
1003.8035	Chemical-Construction Support	Option 1	Process Units - Hotel Load	-	-	725,467	171,210	1,045,381	952,082	1,646,689	764,793	5,885,621	12,742,572	18,628,193
1003.8036	Mechanical - Construction Support	Option 1	Process Units - Hotel Load	-	-	458,534	506,097	640,154	169,422	2,402,074	965,074	5,141,355	3,386,213	8,527,568
1003.8037	Plant Configuration Site Construction Support	Option 1	Process Units - Hotel Load	364,955	142,941	1,004,768	898,332	1,197,607	1,568,087	1,758,407	743,922	7,679,019	1,362,697	9,041,717
1003.8038	Engineering Mechanics - Site Construction Support	Option 1	Process Units - Hotel Load	-	-	106,591	31,014	70,494	24,597	3,802,700	2,031,456	6,066,853	14,263,233	20,330,086
1003.8042	Civil / Structural	Option 1	Process Units - Hotel Load	-	-	-	-	1,470	(1,470)	0	4,253	4,253	(4,253)	-
1004.8041	Supervision / Admin	Option 1	Process Units - Hotel Load	191,043	130,726	311,591	322,573	358,245	598,516	(7,086)	(16,736)	1,888,873	16,736	1,905,609
1004.8042	Civil / Structural	Option 1	Process Units - Hotel Load	196,981	159,218	162,221	558,828	211,557	80,875	(20,916)	1,389,671	85,300	1,474,971	1,474,971
1004.8044	Electrical / I&C Procurement and Fabrication Support	Option 1	Process Units - Hotel Load	-	-	-	91,679	292,852	636,604	470,449	384,300	1,875,884	720,009	2,595,894
1004.8046	Chemical-Procurement/Fabrication Support	Option 1	Process Units - Hotel Load	-	-	1,431,825	2,274,597	2,814,436	4,928,727	3,912,517	2,659,137	18,021,239	1,623,147	19,644,386
1004.8047	Mechanical - Procurement/Fabrication Support	Option 1	Process Units - Hotel Load	-	-	16,059	47,574	124,268	79,751	409,136	234,116	910,903	394,067	1,304,971
1004.8048	Plant Configuration - Construction, Procurement & Fabrication Support	Option 1	Process Units - Hotel Load	-	-	-	-	-	69,771	227,263	183,597	482,632	5,264,984	5,747,615
1004.8049	Equipment Qualification	Option 1	Process Units - Hotel Load	-	-	362,062	523,591	1,232,352	1,907,805	2,530,496	1,530,368	8,086,674	1,032,506	9,389,180
1005.8051	Supervision / Admin	Option 1	Process Units - Hotel Load	-	-	151,052	160,517	175,689	162,284	(296)	(6,879)	642,368	6,879	649,247
1005.8052	Mechanical - Startup & Operations Support	Option 1	Process Units - Hotel Load	51,174	(9,138)	-	796	269	1,122	23,607	482	68,313	121,094	189,407
1005.8053	Electrical / IC Startup and Operations Support	Option 1	Process Units - Hotel Load	46,882	10,550	25,663	20,912	5,947	1,256,130	988,183	199,094	2,553,360	559,633	3,112,993
1005.8054	Civil/ Structural Startup Support	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
1005.8055	Engineering Mechanics Startup Support	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
1005.8057	Chemical/Mechanical Engineering Startup Support	Option 1	Process Units - Hotel Load	-	-	298,466	148,302	25,519	16,652	7,110	(2,538)	493,511	54,610	548,121
1005.8058	Software Modifications	Option 1	Process Units - Hotel Load	-	-	5,361	3,878	(126)	-	-	-	9,113	-	9,113
1005.8059	Plant Configuration	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
1006.8001	Management / Admin ODC	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
1006.8002	Project Controls OPC	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
1006.8003	Engineering Assurance ODC	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
1006.8005	Document Management	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
1006.8006	Engineering Training	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
1006.8011	Business Travel	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
1006.8049	Engineering Mechanics	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
1006.8052	Process Unit Responsible Engineer Startup Support	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	8,990	8,990	-	925,155
1006.8053	Electrical / IC Startup Support	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	925,155
1006.8054	Civil/ Structural Startup Support	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	3,940,699
1006.8055	Engineering Mechanics Startup Support	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	3,540,890
1006.8057	Chemical/Mechanical Engineering Startup Support	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	1,226,667
1006.8059	Plant Configuration	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	1,721,000
1006.8057	Chemical/ Mechanical Engineering Startup Support	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	10,780	10,780	-	5,560,566
1006.8059	Plant Configuration	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	1,136,403
MA 10 - Subtotal				\$ 3,484,359	\$ 2,134,477	\$ 14,575,583	\$ 17,134,174	\$ 22,046,120	\$ 33,869,805	\$ 42,136,740	\$ 21,636,234	\$ 157,017,492	\$ 125,313,776	\$ 282,331,268
1100.8101	Management / Administration	Option 1	Process Units - Hotel Load	-	-	281,759	280,060	273,959	285,815	114,557	88,937	1,325,087	902,807	2,227,893
1100.8102	NSA Project Controls	Option 1	Process Units - Hotel Load	-	-	174,507	104,467	242,430	197,873	98,429	17,540	835,245	656,125	1,491,371
1101.8111	Business Travel	Option 1	Process Units - Hotel Load	-	-	138,438	135,690	81,073	31,245	27,292	7,608	421,345	83,461	504,806
1101.8112	Temporary Assignments	Option 1	Process Units - Hotel Load	5,237	50,448	105	-	-	-	-	-	55,790	-	55,790
1101.8119	Other ODCs (Legal & S/C Costs)	Option 1	Process Units - Hotel Load	-	-	982,845	205,992	167,879	1,383	90,480	23,960	1,472,539	149,737	1,622,276
1102.8121	Defense of Licensing Basis	Option 1	Process Units - Hotel Load	822,766	347,935	1,153,921	1,026,642	854,738	605,424	503,792	543,676	5,856,894	5,803,749	11,460,643
1102.8122	Compliance Program	Option 1	Process Units - Hotel Load	-	-	390,360	447,752	437,804	373,829	389,371	20,946	2,060,062	(5,233)	2,054,829
1102.8123	Condition Reports Work Resolution	Option 1	Process Units - Hotel Load	-	-	163,932	41,032	78	-	-	-	205,042	-	205,042
1103.8132	Chemical Safety Support	Option 1	Process Units - Hotel Load	-	-	-	-	105,018	506,661	196,110	454,929	1,262,718	2,750,026	4,012,744
1103.8133	Laboratory Support	Option 1	Process Units - Hotel Load	-	-	-	-	199,429	10,744	111,095	2,027	323,295	(113,122)	210,173
1104.8141	ES&H Program	Option 1	Process Units - Hotel Load	214,824	123,397	513,275	377,865	207	28	(3,998)	1,225,598	3,998	1,229,596	1,229,596
1104.8142	Radiological Protection	Option 1	Process Units - Hotel Load	5,834	-	35	-	-	-	-	45	5,913	(45)	5,869
1104.8143	Environmental Protection Program	Option 1	Process Units - Hotel Load	167,163	89,368	294,004	272,147	299	88	(30)	(914)	822,125	914	823,040
1104.8144	Industrial Safety Program	Option 1	Process Units - Hotel Load	123,653	82,409	323,694	108,082	448	12	-	(703)	637,595	703	638,299

Schedule 7.11

CB&IAREVA MOX Services, LLC.
MFFF Project Costs - Actual Costs Incurred Through April 2013 by Cost Account and Claim Category

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I] = A+B+...+H	[J] = K-I	[K]
				Pre-June 2007	June 2007 - September 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	October 2012 - April 2013	Subtotal Through April 2013	ETC	Total 2012 Rebaseline With Addendum
1104.8145	Waste Management Program	Option 1	Process Units - Hotel Load	76,639	55,140	226,463	(34,463)	315	30	-	-	334,145	-	334,145
1104.8146	Fitness for Duty Program	Option 1	Process Units - Hotel Load	75,721	59,078	246,317	133,269	624	-	-	(729)	514,353	729	515,082
1104.8147	Emergency Response Program	Option 1	Process Units - Hotel Load	23,919	16,287	30,721	23,772	-	73	-	(952)	93,746	952	94,698
1104.8148	Employee Safety Incentive Program	Option 1	Process Units - Hotel Load	-	-	20,287	60,314	202	(825)	-	825	80,802	(825)	79,977
1104.8149	Construction - Safety Engineering Support	Option 1	Process Units - Hotel Load	-	-	212,946	251,686	283	98	(6,012)	(3,175)	455,825	3,175	459,000
1105.8151	Criticality Safety Procurement & Const Support	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	768,539	768,539	3,267,137	4,035,676
1105.8154	Nuclear Radiation Protections	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	262,353	262,353	2,029,024	2,291,377
1105.8155	Nuclear Radiation & Criticality Monitoring	Option 1	Process Units - Hotel Load	-	-	-	1,793	-	-	-	(72)	1,721	72	1,793
1106.8161	Defense of the Safety Basis	Option 1	Process Units - Hotel Load	-	-	-	-	322,598	717,428	146,374	419,200	1,605,601	2,481,470	4,087,071
1109.8191	NRC Costs	Option 1	Process Units - Hotel Load	1,756,253	1,284,341	6,522,697	3,690,046	3,467,542	4,523,724	4,846,769	1,952,118	28,043,489	29,734,433	57,777,922
1109.8192	Physical Security Program	Option 1	Process Units - Hotel Load	-	619	185,202	92,121	123,510	676,603	883,585	405,795	2,367,435	9,825,672	12,193,107
1109.8193	Material Control & Accountability Program	Option 1	Process Units - Hotel Load	2,856	21,109	100,587	140,026	146,822	540,027	1,088,073	627,779	2,667,280	10,785,497	12,452,777
1110.8101	Management / Administration	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	226,869	226,869
1110.8102	Project Controls	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	102,632	102,632
1112.8121	Defense of Licensing Basis	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	1,524,420	1,524,420
1113.8132	Chemical Safety Support	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	567,575	567,575
1115.8151	Criticality Safety Procurement & Const Support	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	951,357	951,357
1115.8154	Nuclear Radiation Protections	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	329,182	329,182
1116.8161	Defense of the Safety Basis	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	493,859	493,859
MA 11 - Subtotal				\$ 3,274,865	\$ 2,130,131	\$ 11,972,094	\$ 7,358,295	\$ 6,425,256	\$ 8,470,279	\$ 8,489,885	\$ 5,583,732	\$ 53,704,537	\$ 72,356,352	\$ 126,060,888
1802.8820	Supplies & Services	Option 1	Process Units - Hotel Load	25,500	69,044	222,983	36,925	600	-	5	119,611	474,668	1,693,026	2,167,694
1802.8821	Office Equipment, Furniture Leases & Purchases	Option 1	Process Units - Hotel Load	840,174	428,230	844,364	19,850	56,461	478,034	318,825	51,428	3,037,366	1,241,388	4,278,754
1803.8830	Temporary Site Features & Services	Option 1	Process Units - Hotel Load	2,887	89,931	29,945	16,363	34,817	73,624	49,353	13,114	310,033	208,946	518,980
1803.8832	Buildings Shops / Trailers	Option 1	Process Units - Hotel Load	4,614,907	5,111,350	7,029,543	45,539	643,365	297,824	1,059,488	385,881	19,189,698	3,331,699	22,521,397
1803.8833	Utilities & Services	Option 1	Process Units - Hotel Load	2,580,600	1,582,334	1,651,111	988,794	2,248,219	4,149,272	7,928,449	3,740,777	28,869,756	20,716,149	45,585,905
1804.8840	Equipment	Option 1	Process Units - Hotel Load	1,056,977	704,373	2,074,039	2,327,851	2,681,746	3,144,320	6,088,084	3,238,803	21,316,194	22,390,586	43,706,780
1804.8842	Construction Materials Management	Option 1	Process Units - Hotel Load	-	202,579	895,872	1,479,147	1,273,795	1,942,404	531	(12,265)	5,782,062	12,265	5,794,327
1804.8843	Tools	Option 1	Process Units - Hotel Load	11,106	29,482	26,849	29,856	15,438	51,087	176,976	48,089	388,883	365,523	754,407
1805.8850	Miscellaneous Field Supplies & Services	Option 1	Process Units - Hotel Load	286,460	351,937	1,951,877	3,777,927	3,795,226	4,732,878	11,472,603	6,918,369	33,287,277	39,654,426	72,941,704
1805.8851	Foreign National Escorts	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
MA 18 - Subtotal				\$ 9,420,211	\$ 8,569,460	\$ 14,726,583	\$ 8,722,252	\$ 10,749,666	\$ 14,869,444	\$ 27,094,515	\$ 14,503,808	\$ 108,655,939	\$ 89,614,008	\$ 198,269,948
2000.9001	Management / Administration	Option 1	Process Units - Hotel Load	652,416	280,109	948,313	1,199,635	1,284,621	1,795,504	2,397,962	1,892,585	10,220,942	2,498,574	12,719,516
2000.9002	Project Controls	Option 1	Process Units - Hotel Load	78,419	29,843	143,786	212,116	232,698	321,089	345,712	188,650	1,550,312	294,402	1,844,714
2001.9014	Test Equipment & Consumables	Option 1	Process Units - Hotel Load	-	-	715,736	611,341	35,131	77,737	176,253	96,470	1,712,668	197,640	1,910,308
2002.9021	Generic Test Documents	Option 1	Process Units - Hotel Load	-	-	-	-	42,957	100,745	-	6	143,707	(6)	143,702
2002.9024	Technical Support	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	38,791	38,791	101,101	139,892
2002.9026	Cold Startup Training	Option 1	Process Units - Hotel Load	-	-	-	-	197,619	367,237	254,507	235,274	1,054,638	156,431	1,211,069
2004.9047	Turnover & Logistics	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	2,852,716	2,852,716
2006.9060	Maintenance Program, Layup/In-Storage	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	1,565	20,984	22,549	4,451,300	4,473,849
2010.9101	Management / Administration - IPT	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	31,409,273	31,409,273
2010.9102	Project Controls - IPT	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	4,389,193	4,389,193
2010.9103	Program Support for Start-up	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	3,425,955	3,425,955
2011.9117	Spare Parts - IPT	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	3,630,728	3,630,728
2012.9124	Technical Support - IPT	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	2,130,381	2,130,381
2012.9126	Cold Startup Training - IPT	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	6,130,662	6,130,662
MA 20 - Subtotal				\$ 730,835	\$ 309,952	\$ 1,807,835	\$ 2,023,093	\$ 1,808,723	\$ 2,416,411	\$ 3,176,000	\$ 2,470,758	\$ 14,743,607	\$ 61,668,351	\$ 76,411,958
2100.9501	Management / Administration	Option 1	Process Units - Hotel Load	1,115,845	347,636	1,209,056	1,284,621	1,795,504	1,472,431	1,775,870	999,336	9,400,299	13,081,711	22,482,010
2100.9502	Project Controls	Option 1	Process Units - Hotel Load	50,108	32,351	77,746	92,002	120,899	192,254	130,024	111,153	806,536	3,535,200	4,341,736
2100.9503	Quality Assurance	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
2101.9511	Business Travel	Option 1	Process Units - Hotel Load	9,135	6,859	49,664	12,409	57,199	29,381	34,841	59,527	259,017	1,769,570	2,028,587
2101.9512	Temporary Assignments	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	6,462,252	6,462,252
2101.9515	Consumables	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	2,438,200	2,438,200
2101.9518	Software	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	9,007	7,875	16,882	3,937,432	3,954,314
2102.9522	Training at Richland	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	1,182,981	1,182,981
2102.9523	Training at LaHague	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	3,675,088	3,675,088
2102.9524	Training at Melox	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	5,648,433	5,648,433
2102.9525	Other Training	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	90,760	195	90,956	(5,232)	85,723
2102.9526	Operations Activities	Option 1	Process Units - Hotel Load	-	-	-	-	39,660	8,552	111,889	2,948	163,049	(5,851)	157,198
2102.9527	Operations Process Simulator	Option 1	Process Units - Hotel Load	-	-	-	7,455	625,657	965,223	(14,028)	4,658	1,588,975	(4,658)	1,584,317
2102.9528	Reference Plant Training Direct Costs	Option 1	Process Units - Hotel Load	-	-	-	-	-	30,959,491	356,203	3,746,459	35,062,352	72,996,975	108,059,327
2103.9531	Organizational Documents	Option 1	Process Units - Hotel Load	120	-	-	18	88,732	172,482	80,175	409,220	3,806,763	4,215,983	4,215,983
2103.9532	Laboratory Procedures	Option 1	Process Units - Hotel Load	-	-	-	-	17,887	1,239	36,091	101,881	157,097	2,520,851	2,677,948
2103.9533	Maintenance Procedures	Option 1	Process Units - Hotel Load	-	-	-	-	22,500	86,259	5,186	423	114,368	4,479,266	4,593,634
2103.9534	Operating Procedures	Option 1	Process Units - Hotel Load	-	-	-	-	131,165	93,750	72,372	4,008	301,295	7,846,863	8,148,158
2103.9535	Hot Startup Planning	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	1,121,733	1,121,733
2103.9537	Support to Other groups	Option 1	Process Units - Hotel Load	-	-	-	452,324	943,078	751,755	1,136,349	381,713	3,665,219	3,471,309	7,136,528

Schedule 7.11

CB&IAREVA MOX Services, LLC.
MFFP Project Costs - Actual Costs Incurred Through April 2013 by Cost Account and Claim Category

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I] = A+B+...H	[J] = K-L	[K]
				Pre-June 2007	June 2007 - September 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	October 2012 - April 2013	Subtotal Through April 2013	ETC	Total 2012 Rebaseline With Addendum
2104.9541	Early Option 2 Proposal Development (Labor)	Option 1	Process Units - Hotel Load	-	-	1,089,424	(342,094)	(74,629)	-	-	5,015	677,716	(5,015)	672,700
2105.9550	Aqueous Polishing Activities	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	57,949	176,492	236,441	-	3,216,088
2105.9551	Powder Pellet Activities	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	21,987	123,473	145,460	-	6,619,357
2105.9552	Rod Bundle Activities	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	77,891	96,339	174,229	-	2,473,008
2105.9553	Balance of Plant Activities	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	92,638	93,671	186,309	-	6,595,420
2105.9554	Laboratory Activities	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	6,076	9,026	15,102	-	14,886,243
2105.9555	Maintenance Activities	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	188,401	343,623	532,024	-	31,130,877
2105.9556	Logistics / Warehousing	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	2,675,586
2105.9557	System Engineering Activities	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	35,731	172,417	208,148	-	12,540,813
MA 21 - Subtotal				\$ 1,175,208	\$ 386,846	\$ 2,425,890	\$ 1,506,735	\$ 3,767,652	\$ 34,733,028	\$ 3,692,928	\$ 6,522,406	\$ 54,210,693	\$ 216,608,652	\$ 270,819,345
2201.8138	Relocation	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	20,912	-	20,912	-	20,912
2201.8141	ES&H Program	Option 1	Process Units - Hotel Load	-	-	-	309,733	564,304	911,808	988,136	434,964	3,208,965	-	8,149,431
2201.8143	Environmental Protection Program	Option 1	Process Units - Hotel Load	-	-	-	153,480	739,898	572,053	171,983	1,937,367	3,486,377	-	5,433,744
2201.8144	Industrial Safety Program	Option 1	Process Units - Hotel Load	-	-	-	195,779	281,969	131,128	316,488	(5,419)	919,945	-	930,909
2201.8145	Waste Management Program	Option 1	Process Units - Hotel Load	-	-	-	66,094	386,448	236,288	255,146	164,628	1,108,602	-	3,318,918
2201.8146	Fitness for Duty Program	Option 1	Process Units - Hotel Load	-	-	-	100,698	521,077	429,098	348,012	9,615	1,408,500	-	1,379,366
2201.8147	Emergency Preparedness Program	Option 1	Process Units - Hotel Load	-	-	-	24,594	1,363	107,494	84,002	71,534	288,986	-	1,640,343
2201.8148	Employee Safety Incentive Program	Option 1	Process Units - Hotel Load	-	-	-	54,413	107,855	7,566	57,559	40,741	268,133	-	1,053,890
2201.8149	ES & H Safety Engineer	Option 1	Process Units - Hotel Load	-	-	-	194,992	597,738	688,770	1,167,059	843,227	3,491,786	-	11,290,726
2201.8150	Field Office Supplies	Option 1	Process Units - Hotel Load	-	-	-	-	5,499	-	-	-	5,499	-	5,499
2201.8820	Field Office Supplies	Option 1	Process Units - Hotel Load	-	-	-	88,881	1,328	8	-	-	90,217	-	90,217
2202.8141	ES&H Program	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	1,232,710
2202.8143	Environmental Protection Program	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	949,660
2202.8145	Waste Management Program	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	693,898
2202.8147	Emergency Response Program	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	599,081
2202.8148	Employee Safety Incentive Program	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	177,741
2202.8149	ES & H Safety Engineer	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	2,101,834
2202.9504	Radiological Protection Early Start Up	Option 1	Process Units - Hotel Load	-	-	-	-	-	245,728	579,983	338,182	1,163,893	-	15,591,116
MA 21 - Subtotal				\$ -	\$ -	\$ -	\$ 1,188,683	\$ 3,207,478	\$ 3,350,853	\$ 4,096,338	\$ 2,069,455	\$ 13,912,806	\$ 40,747,190	\$ 54,659,996
Process Units - Hotel Load Total				\$ 36,554,031	\$ 29,231,850	\$ 96,710,540	\$ 85,207,267	\$ 96,487,076	\$ 141,995,362	\$ 141,488,442	\$ 79,253,959	\$ 706,928,527	\$ 905,718,163	\$ 1,612,646,690
1003.8032	Civil / Structural	Option 1	MFFP Construction - Title III Engineering	\$ 813,040	\$ 706,552	\$ 1,778,526	\$ 1,969,803	\$ 4,800,359	\$ 7,548,843	\$ 3,885,051	\$ 569,048	\$ 22,071,221	\$ (761,281)	\$ 21,309,941
1003.8034	Electrical / I&C Site Construction Support	Option 1	MFFP Construction - Title III Engineering	67,969	150,288	(3,303)	683,333	7,059,474	5,404,473	5,494,870	2,563,875	21,420,980	4,815,386	26,236,366
1003.8035	Chemical-Construction Support	Option 1	MFFP Construction - Title III Engineering	780,281	821,560	1,480,968	1,876,924	1,531,215	1,189,545	(26,266)	(424)	7,653,802	424	7,654,227
1003.8036	Mechanical - Construction Support	Option 1	MFFP Construction - Title III Engineering	944,044	283,670	496,763	1,502,303	1,644,349	1,134,338	(12,034)	(65,119)	5,928,315	65,119	5,993,434
1003.8037	Plant Configuration Site Construction Support	Option 1	MFFP Construction - Title III Engineering	582,757	241,426	244,657	1,526,794	6,115,966	6,660,932	4,538,536	1,791,808	21,702,876	2,703,930	24,406,806
1003.8038	Engineering Mechanics - Site Construction Support	Option 1	MFFP Construction - Title III Engineering	103,717	-	22,222	667	20,900	475,912	1,891,079	1,410,412	3,924,099	(2,035,845)	1,889,064
1004.8040	Responsible Engineer Process Unit Fabrication Support	Option 1	MFFP Construction - Title III Engineering	-	-	-	-	38,070	(38,070)	(466)	(466)	(466)	466	(0)
1004.8044	Electrical / I&C Procurement and Fabrication Support	Option 1	MFFP Construction - Title III Engineering	2,589	-	-	-	-	-	(13)	(13)	2,577	13	2,589
1004.8046	Chemical-Procurement/Fabrication Support	Option 1	MFFP Construction - Title III Engineering	1,221,379	547,626	341,378	470,267	335,617	116,572	141	12,456	3,045,436	(12,456)	3,032,980
1004.8047	Mechanical - Procurement/Fabrication Support	Option 1	MFFP Construction - Title III Engineering	-	28,898	93,174	47	969	194,980	1,004	5,021	324,093	(5,021)	319,072
1005.8052	Mechanical - Startup & Operations Support	Option 1	MFFP Construction - Title III Engineering	-	-	-	-	5,652	281,252	13,194	(196)	299,902	196	300,099
1005.8053	Electrical / I&C Startup and Operations Support	Option 1	MFFP Construction - Title III Engineering	-	-	-	-	-	-	-	-	-	-	-
1005.8054	Civil/ Structural Startup Support	Option 1	MFFP Construction - Title III Engineering	-	-	-	-	-	-	-	-	-	-	-
1005.8057	Chemical/Mechanical Engineering Startup Support	Option 1	MFFP Construction - Title III Engineering	-	121,093	114	(632)	-	-	-	(60)	120,514	60	120,575
MFFP Construction - Title III Engineering Total				\$ 4,515,776	\$ 2,901,113	\$ 4,454,500	\$ 8,029,507	\$ 21,552,571	\$ 22,968,776	\$ 15,785,577	\$ 6,286,341	\$ 86,494,160	\$ 4,770,991	\$ 91,265,151
1721.2101	Site Preparation	Option 1	MFFP Construction - Installation/Materials	\$ 28,952,492	\$ 76,248	\$ 348,932	\$ 114,813	\$ -	\$ -	\$ -	\$ 586	\$ 29,493,071	\$ (586)	\$ 29,492,485
1722.2201	Roads & Parking	Option 1	MFFP Construction - Installation/Materials	-	-	-	743,549	-	-	221,089	489,498	1,454,136	316,329	1,770,466
1722.2202	F" Road"	Option 1	MFFP Construction - Installation/Materials	2,736,821	56,685	597,365	-	-	-	-	-	3,390,871	377,053	3,767,924
1723.2301	Yard Structures	Option 1	MFFP Construction - Installation/Materials	-	1,052,490	964,621	125,059	80,580	-	-	-	2,222,750	1,638,589	3,861,339
1723.2501		Option 1	MFFP Construction - Installation/Materials	-	39,309	(39,309)	-	-	-	-	-	-	-	-
1724.2401	Underground Utilities	Option 1	MFFP Construction - Installation/Materials	-	-	266,052	4,519,299	2,938,775	93,994	263,438	140,204	8,221,762	13,093,885	21,315,647
1725.2501	Yard Fire Protection	Option 1	MFFP Construction - Installation/Materials	-	-	84,743	858,733	738,712	(882)	44,025	278,374	2,003,706	1,088,141	3,091,847
1726.2601	Chillers	Option 1	MFFP Construction - Installation/Materials	-	-	-	-	-	-	168,905	-	168,905	6,428,783	6,597,688
1727.2701	Site Security and Perimeter Intrusion Detection and Assessment Syste	Option 1	MFFP Construction - Installation/Materials	-	-	61,905	-	-	2,103,838	2,687,228	137,798	4,990,769	41,567,090	46,557,889
1728.2801	Yard Electrical & Lighting	Option 1	MFFP Construction - Installation/Materials	-	-	165,052	470,824	1,072,083	1,656,196	644,466	4,008,621	2,068,375	6,076,996	9,143,992
1729.2901	Landscaping	Option 1	MFFP Construction - Installation/Materials	-	-	252,936	6,772	-	18,744	12,082	290,534	43,787	334,321	334,321
1731.3150	Administration Building	Option 1	MFFP Construction - Installation/Materials	-	358	1,891,274	9,064,257	50,553	41,131	(1)	1,916	11,049,587	(1,916)	11,047,671
1732.3250	Receiving Warehouse Building	Option 1	MFFP Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	1,257,230	1,257,230
1732.3550		Option 1	MFFP Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	-	-
1733.3350	Secured Warehouse Building	Option 1	MFFP Construction - Installation/Materials	-	-	-	1,598,229	1,210,802	227	-	-	2,809,258	1,620,454	4,429,712
1734.3450	Tech Support & Access Control Building	Option 1	MFFP Construction - Installation/Materials	-	-	-	-	412,461	9,518,291	9,986,750	168,932	20,086,434	464,730	20,551,164
1735.3550	Standby Diesel Generator Building	Option 1	MFFP Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	-	-
1736.3652	Civil / Structural / Architectura	Option 1	MFFP Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	12,694,518	12,694,518

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CB&IAREVA MOX Services, LLC.
MFFF Project Costs - Actual Costs Incurred Through April 2013 by Cost Account and Claim Category

				[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I] = A+B+...+H	[J] = K-I	[K]
				Pre-June 2007	June 2007 - September 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	October 2012 - April 2013	Subtotal Through April 2013	ETC	Total 2012 Rebaseline With Addendum
Cost Account	Cost Account Description	Contract	Claim Category											
1736.3653	Mechanical / Piping	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	9,725	159,971	498,436	668,132	5,013,327	5,681,459
1736.3654	Electrical	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	722,226	92,154	-	814,380	11,431,077	12,245,457
1736.3655	I&C	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	16,056	-	-	16,056	656,409	672,465
1736.3656	Emerg.Diesel Gen.System/Equipment	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	1,383,246	1,345,792	1,160,918	1,300,812	5,190,768	5,477,567	10,668,334
1737.3751	Design	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	190,885	2,614,286	383,944	(1,166)	3,187,949	(126,890)	3,061,059
1737.3752	Civil / Structural / Architectura	Option 1	MFFF Construction - Installation/Materials	-	-	-	207,612	13,824	-	-	-	221,437	2,113,981	2,335,417
1737.3753	Mechanical / Piping	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	342,529	658,756	288,854	1,290,140	1,287,519	2,577,658
1737.3754	Electrical	Option 1	MFFF Construction - Installation/Materials	-	-	-	8,403	-	-	-	6,252	14,655	902,021	916,676
1737.3755	I&C	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	16,332	-	-	16,332	42,523	58,855
1737.3756	Reagent Systems Equipment / Piping	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	152,352	290,501	209,772	652,625	9,089,113	9,741,737
1741.4100	Building Structure	Option 1	MFFF Construction - Installation/Materials	5,296,875	2,262,343	17,350,619	14,437,087	6,549,222	267,072	244,719	128,844	46,536,781	2,444,042	48,980,823
1741.4110	Architectural Features	Option 1	MFFF Construction - Installation/Materials	-	-	2,260	12,555	969,622	1,622,610	1,030,781	883,964	4,221,793	8,351,881	12,573,673
1741.4120	HVAC	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	958,120	2,799,383	7,524,727	3,830,859	15,113,089	21,263,322	36,376,411
1741.4130	MOX Processing Area (BMP) - MOX Processing Area - Level 1 - Fire Pro	Option 1	MFFF Construction - Installation/Materials	29,410	56,062	116,773	83,243	-	76,185	826,838	71,447	1,259,958	11,438,991	12,698,949
1741.4140	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	5,710	158,720	960,329	17,130	858,294	36,533	186,526	(139,388)	2,083,905	0	2,083,905
1741.4150	Process Piping	Option 1	MFFF Construction - Installation/Materials	152,294	188,714	793,163	164,001	(303,331)	52,682	1,002,580	1,906,964	3,957,065	13,984,413	17,941,478
1741.4170	Other Equipment	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	172,413	4,898	225,799	419,664	6,675,116	7,094,780
1741.4180	Electrical	Option 1	MFFF Construction - Installation/Materials	-	149,795	1,144,611	342,382	40,471	157,524	2,764,985	1,688,208	6,287,985	40,922,488	47,210,472
1741.4190	Instrumentation	Option 1	MFFF Construction - Installation/Materials	-	-	212,512	11,127,706	17,011,049	6,035,636	1,095,133	97,129	35,579,165	41,686	35,620,852
1742.4210	Architectural Features	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	4,698	1,016,666	1,112,508	2,285,101	2,322,298	4,607,399
1742.4220	HVAC	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	96,610	180,339	3,745,079	6,745,495	14,225,771	20,971,266
1742.4230	MOX Processing Area (BMP) - MOX Processing Area - Level 2 - Fire Pro	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	-	-
1742.4240	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	32,184	10,458	-	-	42,641	-	-
1742.4250	Process Piping	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	45,183	418,869	1,011,019	1,475,072	9,886,531	11,361,603
1742.4270	Other Equipment	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	2,348	2,568,002	2,570,349
1742.4280	Electrical	Option 1	MFFF Construction - Installation/Materials	-	-	-	1,464,166	1,584,597	480,774	790,972	1,431,665	5,752,174	23,607,220	29,359,393
1742.4290	Instrumentation	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	57,250	-	-	57,250	1,671,598	1,728,847
1743.4300	Building Structure	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	5,655,347	7,582,135	10,599,881	62,717	24,644,509	28,748,386
1743.4310	Architectural Features	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	4,981	17,919	7,446	436,859	467,206	4,711,321
1743.4320	HVAC	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	178,556	889,178	1,957,070	880,970	35,237,378	36,243,152
1743.4330	MOX Processing Area (BMP) - MOX Processing Area - Level 3 - Fire Pro	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	173,819	422,993	596,811	8,995,680	9,592,492
1743.4340	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	55,319	49,404	144	104,868	-	104,868
1743.4350	Process Piping	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	20,497	72,192	32,801	125,490	14,150,693	14,276,183
1743.4370	Other Equipment	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	1,178,593	1,178,593
1743.4380	Electrical	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	48,424	1,532,744	608,723	489,879	30,901,068	33,580,847
1743.4390	Instrumentation	Option 1	MFFF Construction - Installation/Materials	-	-	952,901	1,913,243	1,122,423	833,191	6,723	3,671,321	8,499,802	11,178,395	17,678,197
1744.4400	Building Structure	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	78,431	2,071,997	5,155,896	279,173	7,585,496	4,612,772
1744.4410	Architectural Features	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	-	-
1744.4420	HVAC	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	18,792	-	(18,792)	-	-
1744.4430	MOX Processing Area (BMP) - MOX Processing Area - Level 4 - Fire Pr	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	2,882,398	2,882,398
1744.4440	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	83,530	83,530
1744.4480	Electrical	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	610,698	610,698
1744.4490	Instrumentation	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	946,936	946,936
1746.4600	Fuel Assembly / Rods	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	52,684	52,684
1746.4610	Powder & Pellets	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	33,028	182,701	216,041	431,771	4,081,757	4,513,528
1746.4620	Furnaces & Pellet Storage	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	9,420	211,286	125,683	346,389	13,506,544	13,852,934
1746.4630	PuO2 Receiving, Storage & Decanning	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	87,142	595,350	682,492	2,534,589	3,217,081
1746.4640	Laos & Testing	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	1,593,800	1,593,800
1751.5100	Building Structure	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	-	-
1751.5110	Architectural Features	Option 1	MFFF Construction - Installation/Materials	2,967,484	2,243,686	8,591,952	5,125,531	878,702	1,387,600	84,698	47,002	21,326,656	(15,780)	21,310,875
1751.5120	HVAC	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	645,329	35,833	815,789	5,960,719	7,294,497
1751.5130	Aqueous Polishing Process Area (BAP) - AP Process Area - Level 1 -	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	691,198	1,216,975	5,147,721	3,568,938	8,716,658
1751.5140	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	-	92,724	45,817	6,772	-	-	463,630	24,445	633,388	1,168,193	1,801,582
1751.5150	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	-	-	1,048,967	8,027	-	-	368,771	434,166	1,967,341	(33,915)	1,933,426
1751.5170	Other Equipment	Option 1	MFFF Construction - Installation/Materials	192,088	747,237	5,371,460	7,496,372	2,363,528	2,418,841	7,090,567	4,567,879	30,247,972	33,025,741	63,273,713
1751.5180	Electrical	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	160,780	4,568	182,597	70,668	1,588,280	2,006,893
1751.5190	Instrumentation	Option 1	MFFF Construction - Installation/Materials	-	-	248,228	150,211	-	-	46,478	891,316	344,016	1,680,249	15,521,561
1751.5230	Building Structure	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	776,284	776,284
1752.5200	Architectural Features	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	-	-
1752.5220	HVAC	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	-	-
1752.5230	Aqueous Polishing Process Area (BAP) - AP Process Area - Level 2 -	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	-	-
1752.5240	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	-	-
1752.5250	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	139,213	137,497	1,400,442	2,401,091	3,894,901	7,833,766	20,246,811	8,544,302	44,598,022	58,789,593	103,387,615
1752.5270	Other Equipment	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	-	-

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CB&IAREVA MOX Services, LLC.
MFFF Project Costs - Actual Costs Incurred Through April 2013 by Cost Account and Claim Category

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I] = A+B+...+H	[J] = K-L	[K]
				Pre-June 2007	June 2007 - September 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	October 2012 - April 2013	Subtotal Through April 2013	ETC	Total 2012 Rebaseline With Addendum
1752.5280	Electrical	Option 1	MFFF Construction - Installation/Materials	-	-	13,345	1,303,098	235,369	260,250	189,943	164,915	2,166,920	12,073,327	14,240,247
1752.5290	Instrumentation	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	54,546	-	-	54,546	925,402	979,949
1753.5300	Building Structure	Option 1	MFFF Construction - Installation/Materials	-	-	25,228	1,693,904	3,586,273	5,606,483	7,175,599	208,630	18,296,116	(291,576)	18,004,541
1753.5310	Architectural Features	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	5,886	16,364	22,249	1,730,383	1,752,632	
1753.5320	HVAC	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	25,092	47,251	78,701	698,070	849,115	4,157,844	5,006,959
1753.5330	Aqueous Polishing Process Area (BAP) - AP Process Area - Level 3 -	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	118,613	115,000	233,613	1,616,838	1,850,451	
1753.5340	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	96,535	113,444	30,623	240,602	(1)	240,601
1753.5350	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	71,066	111,006	865,313	1,509,374	954,371	856,313	1,287,495	828,025	6,482,963	8,645,283	15,128,246
1753.5370	Other Equipment	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	729,933	729,933
1753.5380	Electrical	Option 1	MFFF Construction - Installation/Materials	-	-	-	439,795	755,200	133,716	85,311	119,270	1,533,291	14,860,181	16,393,472
1753.5390	Instrumentation	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	179,373	15,904	-	195,278	1,194,739	1,390,017
1754.5400	Building Structure	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	5,506	8,602	5,439,884	352,530	5,806,522	62,219	5,868,741
1754.5410	Architectural Features	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	690	28,640	29,330	1,671,830	1,700,960	
1754.5420	HVAC	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	22,293	1,035	10,774	211,871	245,973	4,223,915	4,469,887
1754.5430	Aqueous Polishing Process Area (BAP) - AP Process Area - Level 4 -	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	128	72,422	72,549	2,071,378	2,143,927	
1754.5440	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	235,069	380,365	550,570	1,166,004	197,999	1,364,002
1754.5450	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	127,050	722,070	376,202	1,265,523	14,675,841	15,901,164
1754.5470	Other Equipment	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	503,476	503,476
1754.5480	Electrical	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	177,596	212,725	254,964	645,285	15,570,379	16,215,664
1754.5490	Instrumentation	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	814,419	814,419
1754.5540	Building Structure	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	-	-
1755.5500	Architectural Features	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	1,931	1,330	3,160,802	3,233,256	6,397,319	4,163,263	10,560,583
1755.5510	HVAC	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	-	-
1755.5520	HVAC	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	150,981	468,064	717,606	8,721,535	9,439,141	
1755.5530	Aqueous Polishing Process Area (BAP) - AP Process Area - Level 5 -	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	39,229	59,332	506	1,345	1,851	1,388,158	1,390,009
1755.5540	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	724,942	337,932	474,314	2,453,188	504,840	2,042,028
1755.5550	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	204,000	102,969	306,969	9,356,725	9,663,694
1755.5570	Other Equipment	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	213,102	213,102
1755.5580	Electrical	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	149,572	91,999	180,049	421,620	12,939,776	13,361,396
1755.5590	Instrumentation	Option 1	MFFF Construction - Installation/Materials	-	-	833,082	3,373,157	1,411,655	755,572	(138,700)	861,462	7,096,228	8,341,816	15,438,044
1756.5600	Building Structure	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	512	1,539	109,288	2,507,727	2,619,067	2,721,234	5,340,300
1756.5670	Other Equipment	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	-	-
1756.5680	Electrical	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	187,169	187,169
1756.5690	Instrumentation	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	10,436	10,436
1757.5730	PAF	Option 1	MFFF Construction - Installation/Materials	-	43,412	(7,604)	-	-	-	-	(356)	35,452	356	35,808
1758.5810	Mechanical Systems	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	1,300	1,300	11,155,556	11,156,856
1758.5850	Chemical Systems	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	7,082,040	7,082,040
1761.6100	Building Structure	Option 1	MFFF Construction - Installation/Materials	1,422,400	863,347	7,810,990	6,194,491	3,315,260	1,578,376	283,860	153,199	21,621,923	(138,077)	21,483,846
1761.6110	Architectural Features	Option 1	MFFF Construction - Installation/Materials	653,289	180,044	1,218,204	497,261	329,755	(464,891)	117,141	326,567	2,857,370	2,103,010	4,960,379
1761.6120	HVAC	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	20,480	96,979	60,853	56,178	234,489	4,130,132	4,364,621
1761.6130	Shipping and Receiving Area (BSR) - Shipping and Receiving Area - Lx	Option 1	MFFF Construction - Installation/Materials	-	52,117	90,807	1,093	-	-	540,847	9,019	693,883	749,451	1,443,333
1761.6140	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	-	5,404	689,514	29,779	154,455	-	-	-	879,153	69,445	948,598
1761.6150	Process Piping	Option 1	MFFF Construction - Installation/Materials	-	226,567	138,535	16,265	(143,591)	-	46,995	489,535	774,307	425,375	1,199,682
1761.6170	Other Equipment	Option 1	MFFF Construction - Installation/Materials	-	-	-	2,355	89,649	1,784	-	1,846	176,496	181,954	358,450
1761.6180	Electrical	Option 1	MFFF Construction - Installation/Materials	-	-	2,748,873	587,236	139,791	746,671	4,765,218	980,866	9,968,654	(892,319)	9,076,335
1761.6190	Instrumentation	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	60,969	-	-	60,969	1,032,540	1,093,509
1762.6200	Building Structure	Option 1	MFFF Construction - Installation/Materials	-	-	32,007	2,190,190	4,312,324	2,199,498	2,344,647	206,922	11,254,588	(254,948)	11,030,640
1762.6210	Architectural Features	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	144,469	144,469	664,524	808,993	
1762.6220	HVAC	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	40,168	489,310	315,210	873,678	1,718,366	6,157,548	7,875,915
1762.6230	Shipping and Receiving Area (BSR) - Shipping and Receiving Area - Lx	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	41,292	299,981	341,273	1,107,122	1,448,395
1762.6240	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	9,120	7,425	3,554	-	20,100	-	20,100
1762.6250	Process Piping	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	311,367	311,367
1762.6270	Other Equipment	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	34,875	34,875
1762.6280	Electrical	Option 1	MFFF Construction - Installation/Materials	-	-	-	368,773	665,019	43,885	574,852	126,776	1,779,306	3,557,495	5,336,801
1762.6290	Instrumentation	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	334,483	334,483
1763.6300	Building Structure	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	2,941	630,589	5,333,648	634,015	6,601,193	(1,000,557)	5,600,636
1763.6310	Architectural Features	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	260	-	-	260	1,669,257	1,669,516
1763.6320	HVAC	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	33,040	80,829	182,911	418,788	6,852,433	7,568,000	
1763.6330	Shipping and Receiving Area (BSR) - Shipping and Receiving Area - Lx	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	26,928	26,928	1,632,284	1,659,212
1763.6340	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	11,342	9,476	-	20,818	37,516	58,334
1763.6350	Process Piping	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	863,815	863,815
1763.6370	Other Equipment	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	105,520	105,520
1763.6380	Electrical	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	60,660	148,750	109,345	94,534	413,289	8,317,587	8,730,876
1763.6390	Instrumentation	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	489,747	-	-	489,747	1,289,494	1,779,241
1764.6400	Building Structure	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	1,069	11,136	380,099	2,097,692	2,489,996	582,445	3,072,441
1764.6470	Other Equipment	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	-	-

Schedule 7.11

CB&IAREVA MOX Services, LLC.
MFFF Project Costs - Actual Costs Incurred Through April 2013 by Cost Account and Claim Category

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I] = A+B+...H	[J] = K-I	[K]
				Pre-June 2007	June 2007 - September 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	October 2012 - April 2013	Subtotal Through April 2013	ETC	Total 2012 Rebaseline With Addendum
1764.680	Electrical	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	10,454	-	10,454	175,887	186,341
1764.690	Instrumentation	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	10,457	10,457
1771.7100	Building Structure	Option 1	MFFF Construction - Installation/Materials	-	-	101,830	13,508	104,692	870,180	-	33,913	1,124,123	7,301,668	8,425,791
1771.7110	Architectural Features	Option 1	MFFF Construction - Installation/Materials	229,577	(204,811)	393,772	1,460	-	499,575	-	-	919,573	500,483	1,420,056
1771.7120	HVAC	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	45,961	-	(45,961)	-	4,359,752	4,359,752
1771.7130	Fire Protection	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	-	-
1771.7140	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	35,057	35,057
1771.7170	Other Equipment	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	-	-
1771.7180	Electrical	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	5,799	-	53,507	59,306	1,622,821
1771.7190	Instrumentation	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	-	1,682,127
1772.7200	Building Structure	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	4,152,529	3,330,904	2,981,049	1,969,728	12,434,210	26,787,906	39,222,116
1772.7210	Architectural Features	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	-	30,559,031
1772.7270	Other Equipment	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	-	113,238
1772.7280	Electrical	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	1,494	7,920	9,414	1,081,917	1,091,331
1774.7401	Subcontractor Project Management/Project Controls	Option 1	MFFF Construction - Installation/Materials	74,000	1,096,000	955,099	(2,708)	12,984,360	14,353,355	20,959,493	6,623,211	57,042,809	15,803,996	72,846,805
1774.7402	Subcontractor Project Administration/Accounting	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	-	-
1774.7403	Subcontractor Quality Assurance / Quality Control	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	-	-
1774.7404	Subcontractor Environmental, Safety and Health	Option 1	MFFF Construction - Installation/Materials	-	-	-	3	-	-	-	(3)	(0)	3	3
1774.7405	Subcontractor Home Office Support	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	-	-
1774.7406	Subcontractor Mobilization	Option 1	MFFF Construction - Installation/Materials	-	-	-	226,380	441,923	188,526	(23,760)	-	833,069	26,760	859,829
1774.7407	Subcontractor Demobilization	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	107,965	4,725	42,623	4,086	159,399	420,732	580,131
1774.7408	Dewatering, Erosion and Sedimentation Control	Option 1	MFFF Construction - Installation/Materials	-	26,170	166,814	(16,515)	-	-	-	5	176,474	(5)	176,470
1774.7409	Equipment Rental (Including Vehicles)	Option 1	MFFF Construction - Installation/Materials	-	32,748	10,764	(7,169)	2,520,060	6,167,893	8,801,309	3,079,835	20,605,440	339,298	20,944,738
1774.7410	Miscellaneous Procured Services	Option 1	MFFF Construction - Installation/Materials	-	-	51,301	77,463	483,948	177,117	43,734	1,346,850	100,288	1,447,138	1,447,138
1774.7411	Consumables and Expendable Materials	Option 1	MFFF Construction - Installation/Materials	469	49,834	108,767	167,159	292,367	1,077,994	691,295	-	677,023	4,263,877	4,263,877
1774.7412	Performance Bond	Option 1	MFFF Construction - Installation/Materials	434,539	400	-	730,100	348,173	(447,771)	177,018	-	1,242,459	(135,425)	1,107,034
1774.7413	Tools	Option 1	MFFF Construction - Installation/Materials	29,080	171,632	7,193	(56,290)	4,275	84,862	217,721	-	458,474	(71,108)	387,367
1774.7414	Craft Distributable and Indirect Costs	Option 1	MFFF Construction - Installation/Materials	4,544	35,762	26,974	(6,438)	832,084	2,293,143	9,936,101	532,502	13,654,674	469,497	14,124,171
1774.7415	Concrete Batch Plant	Option 1	MFFF Construction - Installation/Materials	757,087	2,838,266	2,553,430	(2,370,599)	-	-	-	-	3,778,185	-	3,778,185
1774.7416	Independent Test Lab	Option 1	MFFF Construction - Installation/Materials	-	4,271	998,543	155,486	78,108	138,680	390,027	981	1,766,096	121,328	1,887,424
1774.7417	NDE Testing	Option 1	MFFF Construction - Installation/Materials	-	52,852	881,280	(29,906)	-	-	-	-	904,226	-	904,226
1774.7418	Craft Support for MFFF Construction	Option 1	MFFF Construction - Installation/Materials	-	29,623	130,508	143,293	2,411,723	5,314,660	8,908,444	3,158,847	20,097,098	3,773,577	23,870,675
1774.7440	Support Building for the Fabrication of Supports on Site Specific to BRF Distributables	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	45,776	1,672,819	6,183,901	7,902,496	31,464,467	39,366,963
1774.7441	BRF Distributables	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	481,143	481,143
1774.7442	Craft Labor for Non-Discipline Specific Scope	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	3,911	2,457,578	3,411,441	5,872,930	1,198,009	7,070,939
1774.7445	Craft Orientation & Training	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	581,367	2,531,870
1774.7453	Craft Orientation & Training	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	125,868	125,868
1774.7454	Bulk Procurement - Material	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	121,336	(86,808)	34,528	219,448	253,976
1774.7455	Distributable - Subcontract	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	106,960	151,461	258,421	491,964	750,385
1775.7501	Batch Plant Capital Cost	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	-	-
1775.7502	Batch Plant Operations	Option 1	MFFF Construction - Installation/Materials	-	-	-	(5,819)	11,413	114,676	(80,058)	(19,484)	20,729	(20,729)	0
1775.7503	Batch Plant Concrete Materials	Option 1	MFFF Construction - Installation/Materials	-	-	-	(38,182)	45,683	(72,904)	(105,468)	51,972	(118,899)	118,899	(0)
1774.7419	Construction Distributables - Misc	Option 1	MFFF Construction - Installation/Materials	-	-	29,922	384,934	4,916,098	11,752,849	13,803,182	5,158,571	36,045,557	8,471,823	44,517,380
1774.7420	Bulk Cable for MFFF Construction	Option 1	MFFF Construction - Installation/Materials	-	-	-	5,404,852	1,109,314	4,832,475	12,305,077	283,920	23,935,638	12,574,586	36,510,224
1774.7421	Electrical Connectors for MFFF Construction	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	-	-
1774.7422	Electric Glove Box Penetrations for MFFF Constructor	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	3,324	(3,324)	-	-	-	(0)	(0)
1774.7424	Distributables - Bulk Commodity - HVAC	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	1,546,391	2,087,582	2,019,900	5,654,073	11,891,282	17,545,355
1774.7427	Rebar MFFF Construction	Option 1	MFFF Construction - Installation/Materials	-	-	56,213	3,207	-	-	-	-	59,420	-	59,420
1774.7428	Suspense Account - Civil, Structural Commodities	Option 1	MFFF Construction - Installation/Materials	-	-	321,141	10,184,559	8,023,934	6,717,214	12,717,550	2,009,013	39,973,410	4,368,092	44,341,502
1774.7429	Distributables - Bulk Commodity - Stainless Steel Ball Valve	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	355,611	2,543,649	1,107,170	1,683,365	5,689,794	11,398,587	17,088,381
1774.7430	Distributable - Bulk Commodity Account - Chiller	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	1,374,215	714,769	232,109	-	2,321,093	(2)	2,321,091
1774.7431	Bulk Commodity - Fans	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	-	-	-	-	-	-
1774.7432	Suspense Account - Electrical (General)	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	2,863	1,255,868	12,694,630	5,668,054	19,621,415	62,185,651	81,807,066
1774.7433	Suspense Account - Instrumentation & Controls	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	2,776	5,123,486	7,511,583	3,232,578	15,870,423	57,937,349	73,807,772
1774.7434	Suspense Account - Chemical Equipment	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	-	1,153,642	794,228	1,318,494	3,266,365	6,639,377	9,905,742
1774.7435	Distributables - HVAC Equipment	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	49,479	7,345,948	10,669,713	6,200,255	24,265,396	67,865,752	92,131,147
1774.7436	Suspense Account - Process Equipment	Option 1	MFFF Construction - Installation/Materials	-	-	-	-	36,697	-	-	-	36,697	-	36,697
1774.7438	Suspense Account - Mechanical Equipment	Option 1	MFFF Construction - Installation/Materials	-	-	-	9,182,221	17,855,535	27,317,141	36,951,562	10,651,033	101,957,491	41,984,973	143,942,463
1774.7439	Consumable & Expendable Materials Specific to CP-27 - BAP Chemical P	Option 1	MFFF Construction - Installation/Materials	-	-	-	115,047	1,696,740	376,586	6,587,977	4,103,423	12,879,774	24,899,058	37,778,832
MFFF Construction - Installation/Materials Total				\$ 44,148,438	\$ 12,876,563	\$ 64,433,116	\$ 110,285,436	\$ 130,585,370	\$ 178,077,370	\$ 302,358,477	\$ 130,728,248	\$ 973,493,018	\$ 1,230,657,479	\$ 2,204,150,497
1500.8501	Management / Admin	Option 1	Construction Management	\$ 1,350,635	\$ 1,124,307	\$ 3,710,662	\$ 3,991,149	\$ 3,803,614	\$ 4,530,509	\$ 7,359,021	\$ 4,512,409	\$ 30,382,305	\$ 32,820,253	\$ 63,202,558
1500.8502	Project Controls	Option 1	Construction Management	1,059,965	700,152	2,122,753	2,698,538	3,338,320	2,853,379	3,162,854	17,556,498	15,188,510	32,745,008	32,745,008
1500.8503	Quality Assurance	Option 1	Construction Management	483,966	-	540	(223)	-	-	-	(3,964)	480,319	3,964	484,283
1500.8504	ES&H	Option 1	Construction Management	234,070	192,506	268,302	(394)	93	-	(2,996)	691,580	2,996	694,576	694,576
1500.8506	Business	Option 1	Construction Management	71,333	91,563	299,401	342,865	378,732	393,649	483,471	352,462	2,413,477	1,648,374	4,061,850

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-Official Use Only

C 17-001 Fee on Incurred Costs

Schedule 7.11

CB&IAREVA MOX Services, LLC.
MFFF Project Costs - Actual Costs Incurred Through April 2013 by Cost Account and Claim Category

				[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I] = A+B+...H	[J] = K-I	[K]
Cost Account	Cost Account Description	Contract	Claim Category	Pre-June 2007	June 2007 - September 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	October 2012 - April 2013	Subtotal Through April 2013	ETC	Total 2012 Rebaseline With Addendum
1501.8511	Business Travel	Option 1	Construction Management	35,822	18,798	36,923	1,841	3,892	5,771	23,955	49,683	176,685	317,627	494,312
1501.8512	Temporary Assignments	Option 1	Construction Management	4,739	-	-	-	-	58,387	151,078	23,372	237,576	1,564,970	1,802,546
1502.8521	Supervision / Admin	Option 1	Construction Management	-	-	-	-	-	-	-	-	-	-	-
1502.8522	Project Controls	Option 1	Construction Management	-	-	-	-	-	-	-	-	-	-	-
1502.8523	Quality Assurance	Option 1	Construction Management	-	-	-	-	-	-	-	-	-	-	-
1502.8524	ES&H	Option 1	Construction Management	-	-	-	-	-	-	-	-	-	-	-
1504.8512	Temporary Assignments	Option 1	Construction Management	-	-	-	-	-	-	(18)	-	(18)	1,876	1,858
1504.8541	Supervision / Admin	Option 1	Construction Management	877,205	606,303	2,497,114	2,935,889	3,870,929	5,525,004	10,518,587	6,252,301	33,083,333	74,553,524	107,636,857
1505.8551	Supervision / Admin	Option 1	Construction Management	36,719	217,152	991,369	1,224,568	1,004,266	(12,661)	-	(47,626)	3,413,786	47,626	3,461,412
Construction Management Total				\$ 4,154,454	\$ 2,950,780	\$ 9,927,064	\$ 11,194,232	\$ 12,399,847	\$ 13,354,039	\$ 21,698,947	\$ 12,756,179	\$ 88,435,542	\$ 126,149,719	\$ 214,585,261
1901.6017	Human Performance Improvement Program	Option 1	Quality Assurance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	38,121	(110)	38,011	124,895	162,906
1901.6018	QA/QC - JLE/LTTA	Option 1	Quality Assurance	-	-	-	-	-	(0)	-	-	(0)	-	(0)
1901.6020	QA Program Management & Administration	Option 1	Quality Assurance	-	-	-	1,377,059	1,798,277	1,407,255	1,285,537	526,623	6,394,751	6,595,100	12,989,851
1901.6021	Quality Engineering	Option 1	Quality Assurance	-	-	-	3,663,220	2,709,445	2,665,872	3,103,272	1,324,622	13,466,431	10,543,749	24,010,181
1901.6022	Audit & Surveillance	Option 1	Quality Assurance	-	-	-	1,147,316	1,257,325	1,048,446	1,465,328	760,143	5,678,557	7,357,840	13,036,397
1901.6023	Quality Control Projects	Option 1	Quality Assurance	-	-	-	3,277,132	7,479,946	9,261,125	12,401,562	5,613,572	38,033,337	40,913,162	78,946,499
1901.6024	QA & QC Assembly GS	Option 1	Quality Assurance	-	-	-	1,181,754	667,951	765,656	429,934	281,397	3,326,690	1,065,755	4,392,446
1901.6025	MOX Potential Back Charges	Option 1	Quality Assurance	-	-	-	400	(5)	-	-	-	395	4	399
1901.6026	QA/QC Subcontractors	Option 1	Quality Assurance	-	-	-	73,160	-	33,071	14,003	1,375	121,609	135,182	256,791
1901.6027	Testing & Inspection QA/QC	Option 1	Quality Assurance	-	-	-	1,376,788	2,405,078	2,001,503	2,757,013	1,588,841	10,129,222	11,992,227	22,121,449
1901.6028	Commercial Grade Dedication	Option 1	Quality Assurance	-	-	-	6,929	40,902	6,442	-	(1,554)	52,719	1,554	54,273
1901.6029	Regulatory Compliance	Option 1	Quality Assurance	-	-	-	-	13,646	658,173	551,661	286,487	1,509,967	3,637,878	5,147,845
1902.6017	Human Performance Improvement Program	Option 1	Quality Assurance	-	-	-	-	-	-	-	-	-	10,204	10,204
1902.6020	QA Program Management & Administration	Option 1	Quality Assurance	-	-	-	-	-	-	-	-	-	1,809,790	1,809,790
1902.6021	Quality Engineering	Option 1	Quality Assurance	-	-	-	-	-	-	-	-	-	1,277,372	1,277,372
1902.6022	Audit & Surveillance	Option 1	Quality Assurance	-	-	-	-	-	-	-	-	-	1,270,862	1,270,862
1902.6023	Quality Control Projects	Option 1	Quality Assurance	-	-	-	-	-	-	-	-	-	2,036,800	2,036,800
1902.6026	QA/QC Subcontractors	Option 1	Quality Assurance	-	-	-	-	-	-	-	-	-	22,215	22,215
1902.6027	Testing & Inspection QA/QC	Option 1	Quality Assurance	-	-	-	-	-	-	-	-	-	349,467	349,467
1902.6029	Regulatory Compliance	Option 1	Quality Assurance	-	-	-	-	-	-	-	-	-	983,821	983,821
Quality Assurance Total				\$ -	\$ -	\$ -	\$ 12,103,757	\$ 16,372,563	\$ 17,847,543	\$ 22,046,431	\$ 10,381,395	\$ 78,751,690	\$ 90,127,878	\$ 168,879,568
1000.8005	Document Management	Option 1	All Other	\$ -	\$ -	\$ -	\$ -	\$ 40,698	\$ 409,979	\$ -	(600)	450,076	600	450,677
1000.8006	Engineering Training	Option 1	All Other	763,100	327,082	29,242	5,465	-	-	-	(2,516)	1,122,373	2,516	1,124,889
1001.8011	Business Travel	Option 1	All Other	164,332	108,918	103,957	(43,676)	1,077	(26)	-	1,143	335,725	(1,143)	334,582
1001.8012	Temporary Assignments	Option 1	All Other	-	-	-	-	-	-	-	-	-	-	-
1001.8019	Other ODCs	Option 1	All Other	38,014	101,544	29,595	13,585	566,668	43,333	-	97	792,837	(97)	792,740
1002.8022	Chemical	Option 1	All Other	184,146	166,807	256,216	16,690	(3,061)	(134)	-	-	620,664	-	620,664
1002.8023	Mechanical	Option 1	All Other	43,318	7,550	43,828	(990)	(505)	-	-	-	93,201	-	93,201
1002.8024	Laboratory	Option 1	All Other	12,396	27,508	22,647	1,588	(241)	(62)	-	-	63,836	-	63,836
1002.8026	Safety	Option 1	All Other	37,581	33,357	11,238	(2,433)	-	-	-	-	79,743	-	79,743
1002.8027	Reference Plant Support	Option 1	All Other	12,412	5,153	2,718	(654)	8,591	-	-	-	28,220	-	28,220
1003.8031	Supervision / Admin	Option 1	All Other	576,306	386,723	8,461	29,326	-	-	-	(6,767)	994,048	6,767	1,000,816
1004.8048	Plant Configuration - Construction, Procurement & Fabrication Support	Option 1	All Other	-	-	-	-	-	-	-	-	-	-	-
1004.8049	Equipment Qualification	Option 1	All Other	388,084	49,194	(11,311)	115	-	-	-	317	426,400	(317)	426,083
1005.8051	Supervision / Admin	Option 1	All Other	100,516	29,886	7,447	3,616	-	-	-	(904)	140,561	904	141,465
1005.8059	Plant Configuration	Option 1	All Other	-	-	-	-	-	-	-	-	-	-	-
1100.8101	Management / Administration	Option 1	All Other	130,404	76,245	3,565	-	-	-	-	(1,776)	208,438	1,776	210,215
1100.8102	NSA Project Controls	Option 1	All Other	63,145	28,837	2,782	-	-	-	-	(271)	94,493	271	94,764
1101.8111	Business Travel	Option 1	All Other	35,366	28,543	22,012	1,200	-	-	-	306	87,427	(306)	87,121
1101.8119	Other ODCs (Legal & S/C Costs)	Option 1	All Other	176,771	235,272	32,379	275,595	(10,958)	89,342	100,477	709	899,586	(2,705)	896,882
1102.8122	Compliance Program	Option 1	All Other	426,254	203,053	199,965	83,610	0	-	-	(276)	912,606	276	912,882
1103.8132	Chemical Safety Support	Option 1	All Other	266,728	77,285	383,296	445,988	310,700	59,658	481,275	(22,535)	2,002,395	48,119	2,050,513
1103.8133	Laboratory Support	Option 1	All Other	8,707	-	286,740	312,009	98,502	281,510	182,035	(1,707)	1,167,797	60,996	1,228,793
1104.8151	Criticality Safety Procurement & Cons	Option 1	All Other	-	-	-	-	-	-	-	-	-	-	-
1105.8151	Criticality Safety Procurement & Const Support	Option 1	All Other	920,525	(30,429)	554,150	662,598	419,362	351,823	345,365	(25,824)	3,197,571	(28,098)	3,169,473
1105.8152	Criticality Safety Startup Support	Option 1	All Other	1,054	1,428	126,366	90,614	325,796	578,787	235,990	6,110	1,366,146	68,720	1,434,865
1105.8153	Criticality Safety Licensing Support	Option 1	All Other	92,130	304,115	255,341	298,531	272,216	196,761	501,076	(12,451)	1,907,540	138,522	2,046,062
1105.8154	Nuclear Radiation Protections	Option 1	All Other	130,096	123,381	492,008	518,470	571,242	350,828	412,978	(77,578)	2,521,425	215,894	2,737,319
1105.8155	Nuclear Radiation & Criticality Monitoring	Option 1	All Other	33,799	20,367	166,939	134,992	141,657	44,086	72,668	4,075	618,582	(23,817)	594,766
1105.8156	Emerg. Planning & Deactivation Design Spt	Option 1	All Other	3,395	622	27,994	47,372	9,885	15,312	23,339	(257)	127,663	15,471	143,133
1106.8116	Integrated Safety Analysis	Option 1	All Other	-	-	-	-	-	-	-	-	-	-	-
1106.8161	Defense of the Safety Basis	Option 1	All Other	611,711	309,493	472,472	712,959	267,043	13,546	389,414	(13,482)	2,763,155	(100,013)	2,663,143
1106.8162	ISA Review of Design/Construction Modification	Option 1	All Other	333,635	333,069	532,723	442,325	438,305	388,305	312,012	29,919	2,807,292	23,826	2,831,117
1106.8164	Update the Safety Basis	Option 1	All Other	90,459	101,737	773,767	814,913	649,821	687,279	490,578	26,872	3,635,427	(51,014)	3,584,413

Schedule 7.11

CB&IAREVA MOX Services, LLC.
MFFF Project Costs - Actual Costs Incurred Through April 2013 by Cost Account and Claim Category

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I] = A+B+...H	[J] = K-I	[K]
				Pre-June 2007	June 2007 - September 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	October 2012 - April 2013	Subtotal Through April 2013	ETC	Total 2012 Rebaseline With Addendum
1108.8165	Support Update of the ISA Summary	Option 1	All Other	130,945	58,167	197,148	261,271	141,483	244,868	209,322	11,133	1,254,357	(43,192)	1,211,164
1109.8192	Physical Security Program	Option 1	All Other	501,270	333,756	610,561	691,317	803,855	102	56,748	(9,553)	2,988,054	(47,195)	2,940,859
1109.8193	Material Control & Accountability Program	Option 1	All Other	304,892	155,351	373,825	342,581	423,671	(2,750)	13,659	(8,681)	1,602,547	(4,978)	1,597,569
1109.8195	DOE/WSRC Costs	Option 1	All Other	-	-	-	-	-	-	-	-	-	-	-
2000.9001	Management / Administration	Option 1	All Other	-	-	-	-	-	-	-	-	-	-	-
2000.9002	Project Controls	Option 1	All Other	-	-	-	-	-	-	-	-	-	-	-
2000.9003	Quality Assurance	Option 1	All Other	-	-	-	-	-	-	-	-	-	-	-
2001.9011	Business Travel	Option 1	All Other	32,660	1,295	69,610	77,365	49,608	67,664	101,912	199,539	599,652	449,693	1,049,346
2001.9012	Temporary Assignments	Option 1	All Other	-	7,362	1,350	(42)	-	-	-	11,317	19,986	51,129	71,116
2001.9014	Test Equipment & Consumables	Option 1	All Other	-	-	16,598	212,561	87,998	223,888	245,114	627,025	1,413,184	514,110	1,927,294
2001.9017	Spare Parts	Option 1	All Other	-	-	-	-	-	-	-	-	-	385,458	385,458
2002.9021	Generic Test Documents	Option 1	All Other	88,489	199,653	274,878	475,322	173,582	112,848	2,265	(1,386)	1,325,650	174,519	1,500,169
2002.9022	Validation Plans	Option 1	All Other	-	-	388,897	469,449	8,523	(7,282)	-	-	1,059,387	-	1,059,387
2002.9023	General Test Programs	Option 1	All Other	-	-	146,034	88,155	398,043	952,819	697,945	25,051	2,308,049	72,331	2,380,380
2002.9024	Technical Support	Option 1	All Other	6,322	36,416	89,368	244,085	202,034	171,236	270,722	284,630	1,304,813	1,183,990	2,488,803
2002.9026	Cold Startup Training	Option 1	All Other	12,674	7,070	26,450	111,564	(1,548)	(294)	-	(1,896)	153,922	1,896	155,818
2003.9011	Generic Test Documents	Option 1	All Other	-	-	-	-	-	(0)	-	-	(0)	-	(0)
2003.9031	In-Advance Tests in U.S.	Option 1	All Other	-	-	216,183	527,551	703,759	904,486	939,492	1,561,822	4,853,293	3,724,112	8,577,404
2003.9032	In-Advance Tests in Europe	Option 1	All Other	-	-	-	67,711	-	377,009	249,829	313,528	1,304,844	934,154	2,238,999
2004.9041	Aqueous Polishing	Option 1	All Other	-	-	-	-	-	68,261	16,224	9,083	93,568	17,027,731	17,121,299
2004.9042	MOX Process	Option 1	All Other	-	-	-	-	-	41,887	32,345	56,644	130,876	21,545,069	21,675,945
2004.9043	Balance of Plant	Option 1	All Other	-	-	-	-	-	95,243	203,847	88,586	387,677	14,851,196	15,238,873
2004.9044	Reaction to General Incident (RGI)	Option 1	All Other	-	-	-	-	-	-	-	-	-	2,529,087	2,529,087
2004.9048	Laboratory - IPT	Option 1	All Other	-	-	-	-	-	-	85,698	14,018	99,716	7,994,991	8,094,707
2004.9049	Process Control - IPT	Option 1	All Other	-	-	-	-	-	-	-	-	-	7,939,498	7,939,498
2005.9051	SU In-Advance Tests Rework and Modifications in US	Option 1	All Other	-	-	-	-	165,027	10,306	1,297	(1,806)	174,824	1,806	176,629
2007.9071	MOX IPT Rework	Option 1	All Other	-	-	-	-	-	-	-	-	-	34,495,693	34,495,693
2011.9111	Business Travel - IPT	Option 1	All Other	-	-	-	-	-	-	-	-	-	310,955	310,955
2011.9114	Test Equipment & Consumables - IPT	Option 1	All Other	-	-	-	-	-	-	-	-	-	-	-
2012.9124	Technical Support - IPT	Option 1	All Other	-	-	-	-	-	-	-	42,017	42,017	11,008,538	11,050,555
9008.0901	DOE Annual Costs for the SRS M&O Support to MOX to all Infrastructure	Option 1	All Other	-	-	-	-	32,521,284	3,728,638	4,009,514	2,342,550	42,601,986	22,835,331	65,437,317
9009.0901	DOE/WSRC Support	Option 1	All Other	6,130,233	1,015,075	4,298,085	13,608,068	(25,051,461)	-	-	-	-	-	-
9009.0902	DOE Annual Costs for the SRS M&O Support to MOX for Infrastructure	Option 1	All Other	3,254,332	17,825	27,069	69,640	32,458	56,476	640,138	43,885	4,141,823	52,038,017	56,179,840
9009.0903	DOE Tech Sp. (Non-MOX Services Cost)	Option 1	All Other	16,879,927	1,063,284	5,867,325	3,208,078	5,443,425	5,065,368	4,838,075	5,706,505	48,071,987	67,515,297	115,587,284
All Other Total				\$ 32,983,125	\$ 5,952,013	\$ 17,639,918	\$ 25,318,305	\$ 20,505,309	\$ 15,621,001	\$ 16,161,353	\$ 11,216,615	\$ 145,397,639	\$ 268,035,163	\$ 413,432,801
Option 1 Total				\$ 123,274,297	\$ 54,607,645	\$ 212,212,011	\$ 285,568,632	\$ 418,895,306	\$ 533,487,364	\$ 671,452,731	\$ 316,454,524	\$ 2,615,952,710	\$ 2,947,798,671	\$ 5,563,751,381
0110.5101	NRC Costs - MFFF	Base		\$ 12,492,680	\$ 153,849	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 12,646,529	\$ -	\$ 12,646,529
0110.5301	Environmental Report	Base		1,827,146	(17)	(5,390)	524	226	-	-	-	1,822,489	-	1,822,489
0110.5302	Electrolyzer Testing	Base		268,674	-	9	-	1	-	-	-	268,684	-	268,684
0110.5303	ORNL Gallium Testing	Base		100,000	-	-	-	-	-	-	-	100,000	-	100,000
0110.5304	ORNL Criticality Review	Base		150,000	-	-	-	-	-	-	-	150,000	-	150,000
0110.5305	Clemson University Research	Base		1,300,232	104,452	17,293	-	(0)	-	-	-	1,421,977	-	1,421,977
0110.5306	Development & Test Programs	Base		2,061,991	-	12,431	37,835	(636)	-	-	-	2,111,621	-	2,111,621
0110.5307	Site Develop./Infrast. Improvement OPC Work	Base		496,072	-	198	46	24	-	-	-	496,340	-	496,340
0110.5308	SCE Scanner Testing	Base		506,071	-	3,711	-	1,998	-	-	-	511,780	-	511,780
0110.5401	MFFF Operations Planning	Base		-	-	-	-	-	-	-	-	-	-	-
0110.5401	MFFF Operations Planning	Base		3,402	(12,925)	(46,093)	71,878	(101,256)	-	-	-	(84,994)	-	(84,994)
0110.5402	Safety & Systems Integration	Base		213,271	-	(313)	-	(2,543)	-	-	-	210,415	-	210,415
0110.5411	Licensing	Base		5,093,626	(1,752)	(38,454)	(83)	53,805	-	-	-	5,107,144	-	5,107,144
0110.5421	Engineering Support to Licensing - PDG	Base		88,152	-	9,979	-	17	-	-	-	98,149	-	98,149
0110.5422	Engineering Support to Licensing - FDC	Base		104,088	-	17,290	-	1	-	-	-	121,379	-	121,379
0110.5423	Engineer/B1001ering Support to Licensing - C/S	Base		116,314	-	(22)	-	-	-	-	-	116,292	-	116,292
0110.5424	Eng. Support to Lic. - Mech.Prog	Base		195,855	-	193,436	(0)	(105,669)	-	-	-	283,621	-	283,621
0110.5425	Eng. Support to Lic. - Elect/ I&C/S&S/MC&A	Base		25,949	-	(910)	-	40	-	-	-	25,078	-	25,078
0110.5427	Engr Support to Lic. - Nuclear Safety	Base		4,866,167	1,522	55,879	49	(99,997)	-	-	-	4,823,621	-	4,823,621
0110.5428	MFFF Environmental / Permitting	Base		325,655	-	(7,820)	651	1,600	-	-	182	320,268	(182)	320,086
0110.5431	Facility Security Vulnerability Assessment	Base		181,482	-	-	-	-	-	-	-	181,482	-	181,482
0110.5432	Facility Licensing Plans	Base		2,301,491	3,820	418	-	1	-	-	-	2,305,639	-	2,305,639
0110.5450	Miscellaneous Studies	Base		808,170	154,430	(42)	-	8,055	-	-	-	970,612	-	970,612
0110.5451	Coord. & Oversight of CETL Research Projects	Base		186,059	12,093	29,812	28,730	29,258	21	-	21	285,992	(21)	285,972
0110.5452	CAB Change Phase II Scoping & Devel	Base		178,090	-	2,768	-	0	-	-	-	180,858	-	180,858
0110.5453	Monitoring & Inspection Impacts Study	Base		30,700	-	8	70	157	-	-	-	30,935	-	30,935
0110.5454	CAB Phase II	Base		3,950	-	(99)	-	24	-	-	-	3,875	-	3,875
0110.5455	Maximize the use of MFFF Study	Base		16,488	56,872	28,931	916	1,615	(1)	-	(17)	104,804	17	104,822

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C 17-001 Fee on Incurred Costs

Schedule 7.11

CB&IAREVA MOX Services, LLC.
MFFF Project Costs - Actual Costs Incurred Through April 2013 by Cost Account and Claim Category

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I] = A+B+...H	[J] = K-I	[K]
				Pre-June 2007	June 2007 - September 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	October 2012 - April 2013	Subtotal Through April 2013	ETC	Total 2012 Rebaseline With Addendum
0110.5499	Control Area Boundary Change Scoping	Base		732,197	-	(712)	156	-	-	-	-	731,640	-	731,640
0110.5601	DNFSB	Base		-	60	-	-	-	-	-	-	60	-	60
0111.1101	General	Base		5,011,816	(149,889)	(61,556)	(477)	223	-	-	(1,517)	4,798,600	1,517	4,800,117
0111.1101	General	Base		-	-	-	-	-	-	-	-	-	-	-
0111.1102	Mobilization, De-Mob, & Close-out	Base		888,051	-	11,470	-	0	-	-	-	899,521	-	899,521
0111.1103	Management	Base		5,963,957	(24,320)	(16,442)	2,969	19,592	-	-	(1,011)	5,944,745	1,011	5,945,756
0111.1104	Administrative	Base		2,662,459	(414)	(7,821)	4,587	8,829	-	-	(1,951)	2,665,689	1,951	2,667,640
0111.1105	Support Services	Base		5,356,274	(8,231)	(251,113)	4,134	6,071	-	-	1,835	5,108,971	(1,835)	5,107,135
0111.1106	Miscellaneous	Base		754,458	-	(16,767)	-	(1)	-	-	-	737,690	-	737,690
0111.1107	General Expenses	Base		39	-	-	-	(18)	-	-	-	21	-	21
0111.1107	General Expenses	Base		14,247,623	118,105	169,431	(961)	25,155	(6,215)	(247)	(8,373)	14,544,519	8,620	14,553,139
0111.1108	Procedure Development	Base		29	-	-	-	-	-	-	-	29	-	29
0112.8301	MDG Base Contract (Pre FY 2003)	Base		4,739,445	-	(85,257)	-	395,352	-	-	-	5,049,539	-	5,049,539
0113.1301	General	Base		16,144,860	3,082	1,431	4,030	(1,757)	-	-	23	16,151,668	(23)	16,151,645
0113.1302	Receiving	Base		812,940	-	562	-	595	-	-	-	814,098	-	814,098
0113.1303	Powder	Base		2,908,689	22,137	219	(4,274)	880	-	-	-	2,927,651	-	2,927,651
0113.1304	Pellets	Base		2,065,684	-	339	-	275	-	-	-	2,066,298	-	2,066,298
0113.1305	Cladding	Base		1,414,974	-	1,388	-	(567)	-	-	-	1,415,796	-	1,415,796
0113.1306	Assembling	Base		968,526	-	333	(1,251)	(176)	-	-	-	967,433	-	967,433
0113.1307	Laboratory	Base		556,952	-	877	-	(73)	-	-	-	557,757	-	557,757
0113.1308	Samples Pneumatic Transfer	Base		191,095	-	152	-	(149)	-	-	-	191,097	-	191,097
0113.1309	Waste Management	Base		436,191	-	603	-	(62)	-	-	-	436,733	-	436,733
0113.1310	Material Control & Accountability	Base		325,233	-	139	-	162	-	-	-	325,534	-	325,534
0113.1311	Process Control	Base		422,428	-	337	-	(93)	-	-	-	422,672	-	422,672
0113.1312	Integrated Safety Analysis	Base		5,059,365	13,485	9,024	(3,160)	1,919	-	-	-	5,080,631	-	5,080,631
0113.1313	Facility Input	Base		819,271	-	115	-	39	-	-	-	819,425	-	819,425
0113.1399	PDG MOX Process Unplanned Work	Base		386,378	(22,137)	2,343	(2,983)	41	-	-	-	363,641	-	363,641
0114.1401	General	Base		4,933,102	(430)	7,610	(788)	3,981	-	-	1	4,943,475	(1)	4,943,475
0114.1402	Dissolution	Base		4,389,754	-	5,754	-	1,157	-	-	-	4,396,665	-	4,396,665
0114.1403	Purification	Base		3,985,738	-	6,194	245	(2,915)	-	-	-	3,989,262	-	3,989,262
0114.1404	Conversion	Base		1,661,571	-	803	-	15	-	-	-	1,662,388	-	1,662,388
0114.1405	Facility Input	Base		3,071,732	-	3,123	-	(1,219)	-	-	-	3,073,636	-	3,073,636
0114.1406	Safety	Base		7,380,861	119,910	301,311	(13,585)	(3,258)	-	-	-	7,785,239	-	7,785,239
0115.1501	General	Base		13,575,970	(5,654)	(42,220)	15,382	68,901	-	-	(8,408)	13,603,970	8,408	13,612,378
0115.1501	General	Base		16,170	-	-	-	-	-	-	-	16,170	-	16,170
0115.1502	Buildings, Structures & Yard	Base		37,251,740	(58,145)	(2,891)	53,803	24,178	-	-	(8,916)	37,259,769	139,439	37,399,208
0115.1503	Deliverables	Base		20,290	-	(7)	-	-	-	-	-	20,283	-	20,283
0115.1504	Mechanical Programs	Base		3,406,553	108,711	441,813	1,189,506	1,439,766	1,350,564	3,192,667	1,769,210	12,898,790	(3,623,222)	9,275,567
0115.1504	Mechanical Programs	Base		13,364,136	894,469	2,422,468	4,412,334	8,230,458	13,028,045	7,548,863	3,130,769	53,031,542	4,953,153	57,984,694
0115.1505	Electrical Programs	Base		278,395	130,078	174,738	284,451	49,353	-	-	(23,066)	893,949	23,066	917,015
0115.1506	Nuclear Safety Programs	Base		14,140,122	(12,876)	103,014	(3,207)	158	-	115,645	15,749	14,358,605	55,070	14,413,675
0115.1507	Mechanical Systems & Components	Base		14,221,926	500,170	666,523	64,992	61,471	(47)	-	(22,172)	15,492,862	22,172	15,515,034
0115.1507	Mechanical Systems & Components	Base		11,884,214	338,736	837,240	179,344	25,071	3,361	-	8,320	13,276,285	(8,320)	13,267,965
0115.1508	Electrical Systems & Components	Base		27,435,880	1,117,063	4,638,959	6,003,746	1,755,073	23,857	(11,289)	(190,031)	40,773,258	190,031	40,963,289
0115.1509	Nuclear Safety Systems & Components	Base		2,659,638	(7,364)	(14,241)	71,416	1,307	-	-	(24,901)	2,685,855	24,901	2,710,756
0115.1510	Process Mechanical	Base		14,697,198	76,700	362,684	15,415	29,620	-	-	(42,442)	15,139,176	42,442	15,181,618
0115.1511	Mechanical Gloveboxes	Base		5,814,734	-	(219,451)	-	(1,683)	(5)	-	-	5,593,551	44	5,593,595
0115.1512	Site Development / Infrastructure Improvement	Base		1,921,365	809	6,807	25,008	2,146	-	-	(442)	1,965,692	442	1,966,135
0115.1513	Plant Design System	Base		1,360,418	119,436	390,117	540,830	186,998	515,778	406,530	56,654	3,576,761	(177,239)	3,399,522
0115.1513	Plant Design System	Base		19,616,251	1,973,856	6,537,098	8,255,150	3,549,514	2,034,512	2,030,511	205,298	44,202,191	4,951,586	49,153,777
0116.1601	DNFSB & Commonality Questions & Issues	Base		8,536	(8,536)	53	-	482	-	-	0	535	(0)	535
0116.8401	SDG Base Contract Pre-FY 2003	Base		2,516,494	-	(43,980)	596	(9,241)	-	-	-	2,463,869	-	2,463,869
0117.1701	Licensing	Base		14,903,169	(6,956)	6,128	(7,140)	20,860	-	-	(986)	14,915,075	986	14,916,060
0117.1702	Environmental Report	Base		6,678	-	(550)	-	-	-	-	-	6,128	-	6,128
0117.1703	Environment	Base		462,246	-	(4,401)	46	21	-	-	-	457,912	-	457,912
0117.1704	Safety & Health	Base		705,443	-	7,894	35	108	-	-	-	713,480	-	713,480
0117.1705	Emergency Planning	Base		152,633	-	(3,280)	(4)	(1)	-	-	-	149,349	-	149,349
0117.1706	ISA Support (Contractor's ODCs)	Base		19,967,867	(17,212)	(139,925)	39,430	2,517	-	-	(4,385)	19,867,694	4,383	19,872,077
0117.1707	Technology Assessment (TA) Support	Base		1,502,765	38,008	30,291	(18)	-	-	-	-	1,571,146	-	1,571,146
0117.1710	UCNI Training	Base		92,936	-	102	-	-	-	-	-	93,039	-	93,039
0118.1801	Office rent, suppl/serv, equi. & furnit L&f	Base		2,995,728	-	(730)	-	(0)	-	-	-	2,994,997	-	2,994,997
0118.1802	Furniture	Base		2,378,914	-	-	-	(1)	-	-	-	2,378,913	-	2,378,913
0118.1803	Cabling & Telephone	Base		94,023	-	-	-	(0)	-	-	-	94,023	-	94,023
0118.1804	Upfit	Base		387,935	-	-	-	1	-	-	-	387,936	-	387,936
0118.1805	Relocation Services	Base		10,495	-	-	-	-	-	-	-	10,495	-	10,495
0118.1806	Remote Location Office Space	Base		414,673	-	555	-	(95)	-	-	-	415,133	-	415,133

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C 17-001 Fee on Incurred Costs

Schedule 7.11

CB&IAREVA MOX Services, LLC.
MFFF Project Costs - Actual Costs Incurred Through April 2013 by Cost Account and Claim Category

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I] = A+B+...H	[J] = K-I	[K]
				Pre-June 2007	June 2007 - September 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	October 2012 - April 2013	Subtotal Through April 2013	ETC	Total 2012 Rebaseline With Addendum
0119.1901	Computer Equipment & Software L&P	Base		5,681,815	84,037	(45,737)	-	(213)	-	-	-	5,719,902	-	5,719,902
0119.1902	Software	Base		1,136,702	-	-	-	0	-	-	-	1,136,702	-	1,136,702
0119.1903	Service Contracts	Base		283,607	-	-	-	0	-	-	-	283,607	-	283,607
0119.1904	Initial Setup	Base		13,054	-	47	-	-	-	-	-	13,101	-	13,101
0120.8110	Project Management Pre-Construction Planning	Base		4,945,005	(5,618)	39,691	10,519	(14,981)	-	-	7,225	4,981,841	(7,225)	4,974,617
0120.8120	Project Controls Pre-Construction	Base		2,536,122	-	(11,773)	2,414	(839)	-	-	(424)	2,525,500	424	2,525,925
0120.8130	Project QA Pre-Construction	Base		-	-	-	-	-	-	-	-	-	-	-
0120.8140	Project ES&H Pre-Construction	Base		765,345	(2,430)	(6,184)	431	1,163	-	-	(435)	757,890	435	758,325
0120.8160	Project Services & Admin Pre-Construction	Base		62,741	-	1,383	37	200	-	-	(263)	64,098	263	64,361
0120.8170	Procure/Subcontract Admin Pre-Construction	Base		270,533	-	3,742	2,822	7,615	-	-	129	284,841	(129)	284,712
0120.8200	PreOpt1BConstrPrjTitleIII EngineeringMgmt-LL EnginProcurement	Base		3,175	-	(22)	(1)	1	-	-	-	3,153	-	3,153
0120.8210	Engineering Civil / Structural Pre-Constructor	Base		179,711	-	(2,316)	-	(33)	-	-	-	177,361	-	177,361
0120.8220	Engineering Mechanical Pre-Construction	Base		53,541	-	(13,786)	29	-	-	-	-	39,784	-	39,784
0120.8230	Engineering Electrical / I&C Pre-Construction	Base		61,123	-	(204)	-	(1)	-	-	-	60,918	-	60,918
0121.1654	MFFF Operations Planning	Base		4,509,821	63,329	178,651	(2,179)	921	-	-	(2,917)	4,747,625	2,917	4,750,542
0121.1654	MFFF Operations Planning	Base		3,618,614	94,006	205,217	208,014	150,013	190,280	10,718	31,058	4,507,920	1,621,810	6,129,730
0122.1611	PuO2 Polishing Planning	Base		85,261	(85)	74,788	15	(164)	-	-	-	159,814	-	159,814
0122.1612	DUO2 Supply Planning	Base		513,193	711	(25,106)	(478)	0	-	-	-	488,321	-	488,321
0123.1420	Up Front Design	Base		-	-	-	-	-	-	278,388	1,005,625	1,284,013	1,539,098	2,823,111
0123.1420	Up Front Design	Base		-	-	-	-	-	-	-	205,035	205,035	(205,035)	-
0124.1415	DMO - Preserve The Option	Base		-	-	-	-	-	-	2,196,317	409,178	2,605,495	529,228	3,134,723
0661.6101	Project Office Operations	Base		6,360,257	(38,231)	87,980	8,636	(429)	-	-	8,207	6,426,419	(8,207)	6,418,213
0661.6102	Personnel Relocations	Base		35,173	21,877	0	-	163	-	-	(123)	57,090	123	57,213
0661.6103	Project Support Services	Base		-	-	97	-	-	-	-	-	97	-	97
0661.6105	Mixed Oxide (MOX) Proj. Ext. Communications	Base		446,423	-	(5,848)	398	-	-	-	-	440,973	-	440,973
0661.6106	IT Labor	Base		3,769,209	(1,213)	2,483	9,612	(26,302)	-	-	21,272	3,775,062	(21,272)	3,753,790
0661.6110	Independent Review Team (IRT) Review - NA54	Base		1,482,976	-	(10,786)	5	14,164	-	-	(6,936)	1,479,424	6,936	1,486,360
0661.6150	Relocations	Base		2,564,155	325,991	(225,295)	485,312	(53,281)	(39,985)	-	8,297	3,065,194	(8,297)	3,056,897
0662.6201	Project Controls & Integration	Base		14,089,905	(31,464)	7,404	31,531	31,848	-	-	(17,211)	14,112,014	17,211	14,129,225
0662.6202	Risk Management	Base		943,982	(15,698)	(4,809)	(285)	(0)	-	-	(10)	923,180	10	923,190
0663.6301	QA Program Management & Administration	Base		614,908	(20,858)	3,490	-	(0)	-	-	-	597,540	-	597,540
0663.6302	Quality Engineering	Base		1,220,126	-	4,820	(630)	375	-	-	-	1,224,692	-	1,224,692
0663.6303	Quality Verification	Base		1,294,971	-	(7,613)	(787)	(53)	-	-	309	1,286,828	(309)	1,286,519
0664.6401	ES&H Integration	Base		1,353,088	(18,428)	5,329	(307)	1,295	-	-	1,225	1,342,203	(1,225)	1,340,978
0664.6402	Regulatory Affairs Management & Admin.	Base		452,998	(21,760)	-	-	-	-	-	-	431,238	-	431,238
0664.6403	Safety and Health	Base		75	-	-	-	-	-	-	-	75	-	75
0664.6404	Incident Investigation / Corrective Action Program	Base		(53)	-	-	-	-	-	-	-	(53)	-	(53)
0665.6501	Trade-off Studies	Base		1,272	1,337	-	(323)	-	-	-	-	2,286	-	2,286
0665.6502	Plutonium (Pu) Disposition Study	Base		442	-	2,223	(2,208)	-	-	-	-	457	0	457
0666.6600	Project Services & Administration	Base		1,670	-	-	-	-	-	-	-	1,670	-	1,670
0666.6601	Contracts	Base		18,795,203	75,574	61,997	131,139	40,119	-	-	(40,630)	19,063,401	40,630	19,104,032
0666.6602	Administration	Base		2,916,283	(2,376)	(313,290)	362	6,273	-	-	21,647	2,628,898	(21,647)	2,607,252
0666.6603	Electronic Doc / Records Management	Base		1,788,884	-	1,338	6,181	13,201	-	-	(3,709)	1,805,895	3,709	1,809,605
0666.6604	Training & Internal Communication	Base		351,687	(250)	13,107	(1,651)	4	-	-	(45)	362,851	45	362,896
0666.6605	Project Accounting / Finance	Base		2,947,939	(23,830)	(9,323)	-	(3,929)	-	-	8,871	2,920,996	(8,871)	2,912,125
0666.6606	Bank Analysis Fees	Base		3,097	-	-	-	13,606	-	-	-	16,703	-	16,703
0666.6608	Procurement	Base		3,017,076	659	2,677	(4,354)	11,932	-	-	334,318	3,362,308	(334,318)	3,027,990
0666.6609	Asset Management	Base		294,085	-	(6,872)	(209)	2	-	-	1,194	288,199	(1,194)	287,005
0667.6701	Licensing	Base		4,830	-	-	-	-	-	-	-	4,830	-	4,830
0668.6801	Charlotte Office Space	Base		51,795	-	443	-	0	-	-	-	52,238	(0)	52,238
0668.6802	Furniture	Base		33,304	-	-	-	0	-	-	-	33,304	-	33,304
0668.6803	Cabling & Telephone	Base		(17,325)	-	-	-	-	-	-	-	(17,325)	-	(17,325)
0668.6804	UpFit	Base		3,843	-	120	-	(0)	-	-	-	3,962	-	3,962
0668.6805	Relocation Services	Base		2,456	-	-	-	-	-	-	-	2,456	-	2,456
0668.6806	Remote Location Office Space	Base		46,201	-	-	-	(0)	-	-	-	46,201	-	46,201
0668.6810	Office Rent, Supplies, & Services	Base		5,802,326	(13,674)	7,331	37,865	(74)	-	-	-	5,833,773	-	5,833,773
0668.6811	Office Equipment & Furniture Lease & Purchase	Base		2,605,017	(9,412)	2,332	(0)	9,412	-	-	18,645	2,625,995	(18,645)	2,607,350
0668.6812	Computer Equipment and Software Leases & Purchases	Base		8,129,461	(86,247)	(750)	1,288	(0)	(288)	-	1,136	8,089,085	(45,530)	8,043,555
0668.8810	Offsite Office Rent, Supplies & Services	Base		3,293,692	2,611	8,185	(1,113)	(5,115)	-	33,329	-	3,331,590	-	3,331,590
0668.8811	Offsite Off.Equip. & Furnit. L. & P., and Workspace Upfit	Base		328,998	-	356	-	1,148	-	-	-	328,503	-	328,503
0668.8812	Offsite Computer Equip. & Software L. & P.	Base		729,823	-	(265)	-	21,263	-	-	-	749,822	-	749,822
0669.6901	Computer Hardware	Base		74,832	-	91	-	(0)	-	-	-	74,923	-	74,923
0669.6902	Computer Software	Base		21,655	-	62	-	(0)	-	-	-	21,717	-	21,717
0669.6903	Computer Services Contracts	Base		18,228	-	-	-	1	-	-	-	18,228	-	18,228
0669.6904	Initial Setup	Base		(7,860)	-	(1,604)	-	-	-	-	-	(9,464)	-	(9,464)
0670.8299	Process Unit Assembly Planning	Base		2,251,086	(20,280)	30,618	(13,457)	(13,862)	-	-	(34,105)	2,199,999	34,105	2,234,104

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1204.8240	PEG BOA's, Sole Source & Adv.Procure. Items	Base		4,160,079	389,780	1,130,609	1,339,496	90,712	(15,748)	-	(22,690)	7,072,239	22,690	7,094,929
1204.8241	PEG Management	Base		5,486,175	436,302	1,006,571	1,090,668	74,176	(4,830)	-	(9,538)	8,079,524	9,538	8,089,063
1204.8242	PEG Training & Technical Support	Base		3,721,403	159,018	377,985	188,831	25,858	68	-	(10,364)	4,462,800	10,364	4,473,163
1204.8243	PEG Build to Print Manuf./Install. Required	Base		342,295	9,394	61,467	127	7,254	174	-	(180)	420,531	180	420,711
1204.8244	PEG AP/MP Laboratory Design/Build	Base		666,147	84,500	419,105	656,758	326,824	(1,529)	-	(17,335)	2,134,469	17,335	2,151,804
1204.8245	PEG Documents External Review Support	Base		169,943	36,771	82,693	89,599	33,434	(571)	-	(928)	410,942	928	411,870
1204.8246	Process Support AP/MP Lab Design/Build	Base		602,461	6,840	55,008	339,538	378,324	151,892	351	(5,278)	1,529,136	5,278	1,534,414
1204.8247	PreOpt1ACnstPrjctProcUnitPEGVendorDesign	Base		4,390,296	884,720	2,933,228	6,133,451	9,273,421	9,648,935	2,042,314	142,932	35,449,297	690,458	36,139,755
1204.8248	PreOpt1BProcUnitsPEG Design/Bld UnitSpecs	Base		6,756,886	253,413	583,941	1,054,030	1,179,856	241,653	(152)	(58,472)	10,011,155	58,472	10,069,627
1204.8249	PreOpt1ACnstPrjct Proc Units PEG ODCs	Base		540,670	50,937	235,451	380,933	227,979	(4,770)	-	(2,583)	1,428,615	2,583	1,431,198
1204.8293	Medu/Struct Procurements Engineering	Base		-	-	-	-	-	-	-	-	-	-	-
1205.8250	US Regulations/ Process Requirements	Base		3,323,661	199,349	1,094,272	247,398	214,101	-	-	(14)	5,078,767	14	5,078,781
1205.8251	PreOpt1BCnstPrjctProc-USRG/PRG Req Mgmt	Base		1,450,431	87,096	188,589	(1,396)	-	-	-	(175)	1,726,640	175	1,726,815
1205.8252	US Regulations Personnel	Base		1,968,062	-	6,228	(51,021)	20,684	-	-	46	1,943,998	(46)	1,943,952
1205.8253	Process Requirements Personnel	Base		3,593,476	133,808	466,443	288,579	236,108	4,945	-	(6,885)	4,716,474	6,885	4,723,359
1205.8254	Pre-Option 1A Construction Project Process-General Support	Base		1,568,357	23	(11,204)	848	73,056	-	-	-	1,631,079	-	1,631,079
1205.8255	PreOpt1ACnstPrjProc-USRG/PRG Admin Spt	Base		-	-	1,999	-	(1,745)	-	-	(9)	245	9	254
1205.8256	Facility Design Group Support to PEC	Base		421,841	38,859	89,037	34,893	(2,618)	23	-	(5,955)	576,080	5,955	582,035
1205.8257	Systems Engineering Group Support to 155EG	Base		252,110	-	(4,684)	97	4,042	-	-	(108)	251,457	108	251,565
1205.8259	PreOpt1ACnstPrjProc-USRG/PRG - ODCs	Base		877,970	59,612	82,458	15,565	1,666	(120)	-	(751)	1,036,399	751	1,037,150
1209.8290	Pre-Option 1B MDG, SDG & PEG Management	Base		4,519,134	110,542	95,838	22,319	40,827	-	-	(7,544)	4,781,116	7,544	4,788,660
1209.8291	DCS Equipment Group Management - ODCs	Base		548,416	(33,922)	37,628	316	26	-	-	(4)	552,460	4	552,464
1211.8131	Project QA - Option 1	Base		699,693	(912)	(6,766)	(964)	(15,135)	-	-	-	666,916	-	666,916
1211.8171	PreOpt1BCnstPrjMgmtPurches Procurement - Mgt & Admin	Base		1,729,621	9,333	5,996	51,761	21,010	-	-	12,726	1,830,448	(12,726)	1,817,722
1212.8292	Commercial Grade Dedication (CGD)	Base		-	-	48,728	600,592	1,283,572	1,352,705	2,880,540	663,735	6,831,892	5,545,158	12,377,050
1212.8292	Commercial Grade Dedication (CGD)	Base		-	-	-	-	-	-	-	-	-	-	-
1212.8293	Chemical/Mechanical Subcontract Technical Representatives (STRs) and	Base		-	-	594,242	1,216,564	2,355,097	1,492,126	3,329,858	1,091,500	10,079,386	7,094,349	17,173,735
1212.8293	Chemical/Mechanical Subcontract Technical Representatives (STRs) and	Base		-	-	-	-	-	-	-	-	-	-	-
1212.8294	Electrical/I&C Procurements Engineering	Base		-	-	625,273	742,069	1,167,767	1,122,469	1,090,178	596,711	5,344,467	3,924,055	9,268,521
1212.8294	Electrical/I&C Procurements Engineering	Base		-	-	-	-	-	-	-	-	-	-	-
1212.8295	PEG Support of Others (Facility Eq)	Base		-	-	-	-	463	-	-	(32)	432	32	463
1212.8296	PassPort Implementation & Support Engineering	Base		-	-	512,469	804,923	974,435	(730)	-	(40,857)	2,250,240	40,857	2,291,097
1212.8296	PassPort Implementation & Support Engineering	Base		-	-	-	-	-	-	-	-	-	-	-
1212.8297	PEG - Vendor Support Activities for Self Procurements	Base		-	-	-	950	12,540	-	-	-	13,490	-	13,490
1212.8297	PEG - Vendor Support Activities for Self Procurements	Base		-	-	-	-	-	-	-	-	-	-	-
1212.8298	PEG Management & Administration (Facility Eq)	Base		-	-	227,810	291,680	667,447	84,748	-	(24,028)	1,247,657	24,028	1,271,685
1213.8292	PEG Technical Support & Training (Facility Eq)	Base		-	-	-	-	-	-	-	-	-	-	-
1301.8302	DCS Integrated Mgt	Base		4,199,266	211,830	714,020	673,675	743,344	(5,607)	-	(27,200)	6,509,327	27,200	6,536,527
1301.8303	MDG Support Services	Base		1,882,237	31,860	201,340	226,940	213,400	(1,449)	-	(10,631)	2,543,697	11,160	2,554,857
1301.8304	MDG Travel & Relocation - DCS	Base		2,715,466	58,268	92,635	30,663	34,159	(7,798)	-	(3,669)	2,919,723	3,669	2,923,393
1301.8305	Production Centers Mgt	Base		1,839,303	-	(13,991)	-	9,540	-	-	-	1,834,853	-	1,834,853
1301.8306	MDG Travel & Relocation Production Centers	Base		1,426,620	105,903	41,337	(23,947)	44,814	(20,701)	-	89	1,574,114	(89)	1,574,025
1301.8307	MDG ODCs Production Centers	Base		2,627,193	(56,828)	191,200	109,430	37,367	(420)	-	205	2,908,149	(205)	2,907,943
1301.8308	MDG Procurement Engineering Support	Base		840,496	-	231	(30,537)	(3,523)	-	-	(200)	806,467	200	806,667
1301.8390	Design Offices Mgt	Base		10,097,489	380,415	1,630,560	721,642	381,295	(2,337)	-	(18,786)	13,190,278	18,786	13,209,064
1301.8391	Production Internal Support	Base		7,492,722	432,692	1,699,781	964,704	508,395	(53,879)	-	(28,340)	11,016,075	28,340	11,044,415
1302.8309	Technical Management	Base		12,153,769	304,328	889,843	881,082	384,636	(8,791)	-	4,461	14,609,529	(4,461)	14,605,068
1302.8310	Technical Requirement Representatives	Base		3,558,507	109,288	117,740	10,726	(401,930)	-	-	(3,376)	3,990,954	3,376	3,994,330
1302.8392	Follow-up	Base		4,904,285	473,618	2,205,519	2,391,347	1,420,566	(7,437)	(190)	(63,197)	11,324,513	63,197	11,387,710
1302.839A	TSR Support from PDG	Base		-	-	52,228	358,065	91,879	(6,974)	-	(563)	494,633	563	495,197
1302.839B	LLP/LTP/NTF Detailed Piping Design	Base		-	-	-	96,148	1,083	-	-	(398)	187,805	398	188,202
1303.8312	NDD - PuO2 Can Receiving & Emptying	Base		819,753	-	(777)	358,815	2,650	(283)	-	(5,868)	1,174,290	5,868	1,180,158
1303.8313	NDP - Primary Dosing	Base		2,226,652	-	433,387	372,763	42,490	(40)	-	(799)	3,074,493	799	3,075,291
1303.8314	NDS - Final Dosing	Base		2,513,754	-	157,387	399,837	22,499	(126)	-	(5,822)	3,087,530	5,822	3,093,351
1303.8319	NTM - Jar Storage & Handling	Base		3,028,940	-	596,313	581,358	60,580	(227)	-	(722)	4,266,241	722	4,266,963
1303.8320	NXR - Powder Auxiliary	Base		1,297,586	-	399,199	315,018	21,104	45	-	(994)	2,031,958	994	2,032,952
1304.8311	DCE - PuO2 Buffer Storage	Base		588,797	86,610	117,818	348,148	41,759	(1,254)	-	(5,276)	1,176,603	5,276	1,181,879
1304.8312	NDD Conformance	Base		-	-	-	49,134	83,034	(12)	-	(4,239)	127,917	4,239	132,157
1304.8313	NDP Conformance	Base		-	-	-	18,957	2	(447)	-	(18,512)	18,512	447	18,959
1304.8314	NDS Conformance	Base		-	-	-	18,530	102,267	(38)	-	(1,739)	119,019	1,739	120,759
1304.8319	NTM Conformance	Base		-	-	-	70,333	(1,424)	58	-	(809)	68,158	809	68,967
1304.831A	VDR Design	Base		-	-	-	147,189	246,110	145	-	(3,490)	389,955	3,490	393,445
1304.831B	VDU Design	Base		-	-	-	17,914	156,529	(11)	-	(2,438)	171,993	2,438	174,431
1304.831C	DCM Design	Base		-	-	-	118,232	464,953	(555)	-	(6,620)	576,010	6,620	582,630
1304.831G	GMK Design	Base		-	-	-	159,375	75,960	(320)	-	(4,710)	230,306	4,710	235,016
1304.831H	SCE Design	Base		-	-	-	58,749	650,078	(133)	-	(6,241)	702,453	6,241	708,694

Schedule 7.11

CB&IAREVA MOX Services, LLC.
MFFF Project Costs - Actual Costs Incurred Through April 2013 by Cost Account and Claim Category

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I] = A+B+...H	[J] = K-I	[K]
				Pre-June 2007	June 2007 - September 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	October 2012 - April 2013	Subtotal Through April 2013	ETC	Total 2012 Rebaseline With Addendum
1304.831J	SMK Design	Base		-	-	-	75,161	567,096	(1,090)	-	(12,433)	628,734	12,433	641,167
1304.831L	SME Design	Base		-	-	-	66,771	337,738	(555)	-	(3,788)	403,166	3,788	403,954
1304.831M	TAS Design	Base		-	-	-	-	671,658	3,888	-	(5,701)	669,845	5,701	675,546
1304.831N	TCL/TCK/TGJ Design	Base		-	-	-	-	642,694	2,115	-	(8,236)	636,573	8,236	644,809
1304.831P	TCP Design	Base		-	-	-	-	372,288	(483)	-	(5,039)	366,766	5,039	371,805
1304.831Q	TGM Design	Base		-	-	-	157	1,263,617	10,707	-	(12,541)	1,261,940	12,541	1,274,482
1304.831R	TGV Design	Base		-	-	-	-	-	-	-	-	-	-	-
1304.831Y	LFY Design	Base		-	-	-	46,196	232,419	(1,479)	-	(5,668)	271,468	5,668	277,136
1304.8320	NXR Conformance	Base		-	-	-	3,213	(1,136)	(6)	-	-	2,071	-	2,071
1304.8321	NCR - Scrap Processing	Base		2,999,121	(346)	(1,073)	722,418	316,457	(1,360)	-	(16,560)	4,018,657	16,560	4,035,217
1304.8324	PRE / PRF - Grinding	Base		1,523,693	(150)	366,454	344,616	68,739	33	-	(4,852)	2,298,534	4,852	2,303,385
1304.8325	PTE/PTF - Pellet Inspect & Sorting	Base		-	-	139,143	224,141	32,736	35	-	(313)	396,742	313	396,055
1304.8326	PQE - Quality Control & Manual Sorting	Base		-	3,431	11,504	120,110	309,967	(153)	-	(4,739)	440,120	4,739	444,859
1304.8327	PAD - Pellet Repackaging	Base		219,137	56,342	1,889	(141)	(59)	-	-	(1,427)	275,740	1,427	277,167
1304.8328	PAR - Scrap Box Loading	Base		352,683	81,874	44,276	(29)	-	-	-	(2,196)	476,608	2,196	478,804
1304.8329	PSE - Green Pellet Storage	Base		404,451	39,500	160,357	17,478	8,087	11	-	(365)	629,520	365	629,885
1304.832A	KCB Design	Base		-	-	-	1,843	158,918	(14)	-	(4,203)	156,544	4,203	160,747
1304.832G	KDA Design	Base		-	-	-	-	333,317	(2,346)	-	(6,999)	324,012	6,999	330,971
1304.8330	PSF - Sintered Pellet Storage	Base		520,040	3,414	143,977	27,553	22,820	18	-	(469)	717,353	469	717,822
1304.8331	PSI - Scrap Pellet Storage	Base		896,911	57,627	145,394	45,580	1,340	11	-	(1,852)	1,145,011	1,852	1,146,863
1304.8332	PSJ - Ground & Sorted Pellet Storage	Base		637,725	-	187,559	139,473	21,152	33	-	(1,649)	984,293	1,649	985,943
1304.8333	PML - Pellet Handling	Base		3,352,237	67,884	270,997	419,710	91,232	(158)	-	1,109	4,203,011	(1,109)	4,201,902
1304.8336	GDE - Rod Decaldding	Base		300,245	278,544	69,056	284,425	173	(259)	-	(4,629)	927,555	4,629	932,184
1304.8338	SEK Helium Leak Test	Base		135,819	29,287	44,983	10,472	93	(18)	-	(898)	219,738	898	220,636
1304.8344	LCT - Test Line	Base		257,569	366,336	179,788	131,326	16,632	(499)	-	(4,835)	946,336	4,835	951,193
1304.8345	VDR - Filter Dismantling	Base		-	-	12	-	-	-	-	-	12	-	12
1304.8346	DDP - UO2 Drum Emptying	Base		174,431	84,828	201,460	76,289	434	(25)	-	(4,576)	532,841	4,576	537,418
1304.8348	KDM Conformance	Base		-	-	38,864	422,306	16,475	(515)	-	(6,016)	471,114	6,016	477,130
1304.8363	KDA - Decanning (B)	Base		1,611,650	233,842	487,373	772,705	312,304	(1,899)	-	(20,507)	3,395,467	20,507	3,415,974
1304.8365	KPG Sampling, Automatic Conformance	Base		-	-	118,415	476,999	74,851	(2,211)	-	(5,761)	662,292	5,761	668,054
1304.8370	KPA 4010 Purification Cycle Conformance	Base		-	-	-	223,449	11,451	(2,189)	-	(2,189)	231,382	2,189	233,571
1304.8375	KDM - Milling (AFS) - PuO2 Can Handling	Base		432,078	-	6,183	74,934	16,629	11	-	(435)	529,399	435	529,834
1304.8376	KDM 2000 - Prepolishing Milling Conformance	Base		-	-	-	555,587	92,591	(699)	-	(10,782)	636,697	10,782	647,479
1304.8377	KDM 2200 Pre-Polishing Milling	Base		331,974	103,603	89,567	149,283	33,613	(667)	-	(6,068)	701,306	6,068	707,373
1304.8378	KDR 1/2/3/4 ADO Conform	Base		-	-	-	612	-	(17)	-	-	594	-	594
1304.8379	KDR - Recanning Unit	Base		-	34,878	30,818	133,883	11,308	(25)	-	(1,824)	299,040	1,824	300,864
1304.8397	Struct. LLE - Aiken	Base		74,131	31,726	177,213	19,574	3,036	6	-	(8)	305,678	8	305,686
1305.8315	LLP Pneumatic Transfer (33 mm)	Base		1,303,289	(2,069)	407,502	99,789	3,422	(4,199)	-	(122)	1,807,612	122	1,807,734
1305.8316	LLP Pneumatic Transfer (76 mm)	Base		623,051	39,956	265,132	85,123	(25,834)	(1,208)	-	(222)	985,999	222	986,221
1305.8318	NTP Pneumatic Transfer (133 mm)	Base		680,097	65,330	229,305	92,427	19,559	(1,669)	-	(198)	1,084,850	198	1,085,049
1305.8325	PTE/PTF - Pellet Inspect & Sorting	Base		1,667,730	-	(2,469)	(72,825)	767	-	-	-	1,593,203	-	1,593,203
1305.8326	PQE - QC & Manual Sorting	Base		1,252,303	-	4,821	(77,154)	6,048	-	-	-	1,186,020	-	1,186,020
1305.8361	KCB - PuO2 Homogenization & Sampling	Base		1,220,725	99,877	429,927	132,928	(5,465)	(1,222)	-	(1,260)	1,875,511	1,260	1,876,771
1305.8362	KCC - Canning	Base		1,392,935	149,678	179,140	123,147	(2,110)	(1,540)	-	(1,172)	1,840,079	1,172	1,841,250
1305.8365	KPG - Liquid Sampling (W1)	Base		938,353	-	2,336	(39,841)	(444)	-	-	-	900,405	-	900,405
1305.8366	KDB/KPF Electrolyzers (W9)	Base		791,117	260,270	282,656	36,336	(4,329)	(431)	-	-	1,365,619	-	1,365,619
1305.8367	KCA - Oxalic Precip Metering Wheels	Base		584,610	9,293	239,253	(9,195)	(2,230)	(73)	-	(77)	821,559	77	821,636
1305.8368	KDA - Dosing Hoppers (W6)	Base		1,687,364	-	462,374	135,835	(10,764)	(2,908)	-	(474)	2,271,427	474	2,271,901
1305.8369	KPA/KPB - Settler Mixers (W7)	Base		755,694	-	158,548	(820)	(1,920)	(166)	-	132	911,468	(132)	911,336
1305.8370	KPA 4010 Purification Cycle	Base		394,454	-	1,542	(18,473)	(424)	-	-	-	377,100	-	377,100
1305.8371	KCA - Oxalic Precip Oxid Precip & Filter	Base		473,525	26,808	223,163	(2,282)	(2,632)	(262)	-	(77)	718,244	77	718,321
1305.8372	KCA - Oxalic Precip Oxid Calcin Furn	Base		812,692	35,444	76,491	(17,088)	(1,092)	(102)	-	(59)	906,288	59	906,346
1305.8373	KCB - PuO2 Tumbler Mixer	Base		544,678	-	3,188	(14,401)	(588)	-	-	-	532,877	-	532,877
1305.8374	KDD - Dechlorination / Dissolution	Base		2,367,403	81,873	557,369	77,412	(5,258)	(2,067)	-	(61)	3,076,672	61	3,076,733
1305.8376	KDM - Milling (AFS)	Base		1,994,226	-	3,192	(42,894)	587	-	-	(53)	1,955,059	53	1,955,112
1305.8378	KDR - Recanning Unit	Base		1,619,027	1,810	106,045	(14,526)	(574)	(474)	-	(3)	1,711,309	3	1,711,309
1305.8380	KPB 1000 Solvent Recovery	Base		504,804	5,628	240,513	31,665	(3,414)	(4)	-	(71)	779,120	71	779,190
1305.8381	KDM-Pre-Polishing MillingUnits6000-7400 Dsgn	Base		1,060,103	(2,186)	45,087	(3,109)	(244)	(566)	-	-	1,119,284	-	1,119,284
1305.8399	Dosing Hopper - Structural Qualificator	Base		-	-	49,602	(506)	(639)	-	-	-	48,456	-	48,456
1306.8322	NPE/NPF - Homogenization & Pelletizing	Base		1,439,711	-	6,889	(3,907)	(3,064)	-	-	-	1,439,629	-	1,439,629
1306.8323	PFE/PTF - Sintering Furnace	Base		8	-	0	-	-	-	-	-	8	-	8
1306.8334	GME - Rod Cladding & Decontamination	Base		5,116,811	206,879	1,072,447	394,522	(11,675)	(5,250)	-	(572)	6,773,162	572	6,773,734
1306.8339	SDK - Rod Inspection & Sorting	Base		1,146,747	32,716	110,160	53,702	(1,626)	(125)	-	-	1,341,572	-	1,341,572
1306.8347	NBX/NBY - Ball Mining	Base		2,021,092	-	538,651	91,644	(8,667)	(1,065)	-	(279)	2,641,376	279	2,641,655
1306.8348	KDM - Milling	Base		924,499	(723)	8,605	441	4,456	-	-	-	937,277	-	937,277
1306.8349	NPG/H/I-Homogenization & Pelletizing Design	Base		4,543,119	2,610	694,714	663,038	(1,522)	23,711	-	(3,246)	5,922,423	3,246	5,925,669

Schedule 7.11

CB&IAREVA MOX Services, LLC.
MFFF Project Costs - Actual Costs Incurred Through April 2013 by Cost Account and Claim Category

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I] = A+B+...H	[J] = K-I	[K]
				Pre-June 2007	June 2007 - September 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	October 2012 - April 2013	Subtotal Through April 2013	ETC	Total 2012 Rebaseline With Addendum
1308.839S	Struct. LLE - Bagnol	Base		100,476	212,530	566,186	85,613	(6,297)	(1,016)	-	-	957,492	(0)	957,492
1307.831A	VDR	Base		-	60,547	239,002	11,911	3,515	14	-	(182)	314,906	182	314,988
1307.831B	VDU	Base		-	18,767	183,664	2,987	(1,431)	-	-	(54)	203,933	54	203,988
1307.831C	DCM	Base		-	24,230	120,025	40,220	2,251	(46)	-	(1,153)	185,528	1,153	186,681
1307.831D	DCP	Base		-	-	-	-	-	-	-	-	-	-	-
1307.831E	VDQ	Base		-	-	-	-	-	-	-	-	-	-	-
1307.831F	VDT	Base		-	-	-	-	-	-	-	-	-	-	-
1307.831G	GMK	Base		-	2,762	76,885	73,416	(619)	(194)	-	(1,209)	151,041	1,209	152,250
1307.831H	SCE	Base		-	-	-	-	-	-	-	-	-	-	-
1307.831J	SMK	Base		-	19,700	166,417	1,451	516	2	-	(5)	188,081	5	188,086
1307.831K	STK	Base		-	3,409	157,694	2,726	2,913	-	-	1	166,744	(1)	166,743
1307.831L	SXE	Base		-	-	-	-	-	-	-	-	-	-	-
1307.831M	TAS	Base		-	-	-	-	-	-	-	-	-	-	-
1307.831N	TCL/TCK/TCJ	Base		-	-	-	-	-	-	-	-	-	-	-
1307.831P	TCP	Base		-	13,361	233,350	618	1,714	-	-	(30)	249,012	30	249,043
1307.831Q	TGM	Base		-	-	-	26,109	(0)	12	-	(203)	25,918	203	26,121
1307.831R	TGV	Base		-	-	-	-	-	-	-	-	-	-	-
1307.831S	Grp 5.1	Base		-	-	-	-	-	-	-	-	-	-	-
1307.831T	Grp 5.2	Base		-	-	-	-	-	-	-	-	-	-	-
1307.831U	Grp 5.3	Base		-	-	-	-	-	-	-	-	-	-	-
1307.831X	Grp 5.6	Base		-	-	-	-	-	-	-	-	-	-	-
1307.831Y	Grp 5.8 / LFX	Base		-	-	-	-	-	-	-	-	-	-	-
1307.832A	KCB	Base		-	-	-	-	-	-	-	-	-	-	-
1307.832B	KCD	Base		-	-	-	-	-	-	-	-	-	-	-
1307.832C	KPA	Base		-	-	-	-	-	-	-	-	-	-	-
1307.832D	KPB	Base		-	-	-	-	-	-	-	-	-	-	-
1307.832E	KPC	Base		-	-	-	-	-	-	-	-	-	-	-
1307.832F	KWD	Base		-	-	-	-	-	-	-	-	-	-	-
1307.832G	KDA	Base		-	-	-	-	-	-	-	-	-	-	-
1308.832A	KCB	Base		-	-	-	-	-	-	-	-	-	-	-
1308.832B	KCD	Base		-	-	-	-	-	-	-	-	-	-	-
1308.832C	KPA	Base		-	-	-	-	-	-	-	-	-	-	-
1308.832D	KPB	Base		-	-	-	-	-	-	-	-	-	-	-
1308.832E	KPC	Base		-	-	-	-	-	-	-	-	-	-	-
1308.832F	KWD	Base		-	-	-	-	-	-	-	-	-	-	-
1308.832G	KDA	Base		-	-	-	-	-	-	-	-	-	-	-
1308.832H	Grp 5.4	Base		-	-	-	-	-	-	-	-	-	-	-
1308.832J	Grp 5.5	Base		-	-	-	-	-	-	-	-	-	-	-
1309.839C	DCP Design	Base		-	-	-	-	79,466	656,298	1,147,039	107,166	1,989,970	(480,943)	1,509,027
1309.839D	SXE DCR 10-0422	Base		-	-	-	-	-	157,280	18,384	2,735	178,398	(2,735)	175,664
1309.83KU	K Unit Pumps and Valves Design	Base		-	-	-	-	183,737	1,805,638	58,855	8,578	2,056,808	(8,578)	2,048,230
1310.83JL	JLE and LTIA VAR	Base		-	-	-	-	-	463,088	46,337	-	509,425	(7,946)	501,479
1310.83LB	Lab Unit Glovebox Design	Base		-	-	-	-	1,823,756	2,806,472	62,645	25,186	4,718,059	(25,186)	4,692,873
1310.83LE	Laboratory Responsible Engineers and STRs	Base		-	-	-	-	577,714	1,161,203	172,142	16,774	1,927,832	(34,200)	1,893,632
1310.83TS	Task Support Requests	Base		-	-	-	-	31,889	481,769	100,167	15,856	629,681	(23,552)	606,129
1311.83MF	Multi Fuel Design - DCRs	Base		-	-	-	-	276,733	740,433	74,780	6,460	1,098,406	(6,460)	1,091,946
1400.8401	SDG Base Contract Pre-FY 2003	Base		(6,585)	-	-	-	-	6,585	-	-	-	-	-
1401.8402	Management	Base		6,058,851	597,707	1,525,133	1,451,871	1,561,113	927,025	875,831	540,762	13,538,293	1,640,434	15,178,727
1401.8403	Support Services	Base		7,737,462	497,793	1,888,741	1,647,525	1,398,750	1,432,878	923,330	382,415	15,908,894	784,835	16,693,729
1401.8404	SDG Travel & Relocation DCS	Base		1,524,397	126,566	214,607	251,826	138,215	825,817	279,215	72,337	3,432,980	162,889	3,595,869
1401.8405	Facility Space, Utilities Supplies & Service	Base		584,903	(5)	282	-	410	-	-	-	585,591	-	585,591
1401.8418	Design Reviews	Base		367,292	19,417	32,743	2,753	(253)	-	-	(110)	421,842	110	421,952
1402.8406	Platform Hardware & Maintenance	Base		2,670,564	121,413	412,841	299,947	545,288	14,755	-	(5,309)	4,059,500	5,309	4,064,808
1402.8407	Platform Hardware & Maintenance - Aiken	Base		865,432	67,156	388,340	333,668	665,990	910,084	309,647	2,290,928	5,831,246	4,054,734	9,885,980
1402.8408	SDG Procurement Engineering Support	Base		642,996	92,063	246,010	301,309	330,794	95,171	122,653	(7,524)	1,823,473	295,515	2,118,987
1402.8410	Standards	Base		5,347,558	91,302	237,293	259,135	234,013	187,538	42,979	6,617,007	35,074	6,652,081	-
1402.8411	Networks	Base		177,016	43,255	73,304	5,724	(301)	150,221	167,584	109,941	726,744	119,683	846,427
1402.8413	Laboratory Information Management System (LIMS)	Base		291,480	(547)	6,513	21,566	8,527	11,969	51,661	887	392,155	1,797,297	2,189,452
1402.8414	Process PCs	Base		1,373,269	215,335	406,167	197,656	148,873	(3,332)	66,087	109,808	2,513,862	201,632	2,715,494
1402.8417	RESERVED	Base		-	-	-	-	-	-	-	-	-	-	-
1402.8477	PLC & Supervisor for Unit KWG	Base		-	-	-	-	-	-	-	-	-	-	-
1402.8490	Simulation & Testing	Base		724,804	113,273	547,841	553,616	526,666	350,794	407,423	135,627	3,360,043	156,484	3,516,527
1402.8497	CGD Embedded Software Evaluation Support	Base		-	-	-	-	-	-	-	-	-	-	-
1403.8412	Manufacturing Management Information System (MMIS)	Base		4,108,839	419,920	1,307,648	1,122,145	1,126,510	725,435	1,034,773	494,328	10,339,597	1,495,386	11,834,983
1404.8420	PLC's General	Base		4,015,923	349,751	791,284	671,105	760,520	484,963	334,505	211,812	7,619,863	1,543,888	9,163,751
1404.8421	PLC & Supervisor for Unit DRS/DDP	Base		4,007	-	99,636	17,729	(31)	2,254	134,227	64,773	322,595	(4,618)	317,978

Schedule 7.11

CB&IAREVA MOX Services, LLC.
MFFF Project Costs - Actual Costs Incurred Through April 2013 by Cost Account and Claim Category

		[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I] = A+B+...H	[J] = K-I	[K]		
Cost Account	Cost Account Description	Contract	Claim Category	Pre-	June 2007 -	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	October 2012 -	Subtotal Through	ETC	Total 2012
				June 2007	September 2007						April 2013	April 2013		Rebaseline With Addendum
1404.8422	PLC & Supervisor for Unit DCP/DCM	Base		(146)	-	(7)	-	1,894	179,523	249,170	28,906	459,341	6,388	465,729
1404.8423	PLC & Supervisor for Unit DCE/NT/P	Base		43,436	1,139	132,258	128,892	144,203	84,423	-	1,812	536,162	6,321	542,483
1404.8424	PLC & Supervisor for Unit NDD	Base		270,080	16,995	3,902	178,512	268,344	40,634	-	(4,925)	773,543	13,058	786,601
1404.8425	PLC & Supervisor for Unit NDP	Base		472,536	-	10,522	198,174	310,652	64,081	166	(4,380)	1,051,751	24,146	1,075,897
1404.8426	PLC & Supervisor for Unit NBX/NBY	Base		358,053	26,238	21,402	157,334	136,608	(1,700)	209	(1,416)	696,729	14,909	711,638
1404.8427	PLC & Supervisor for Unit NDS	Base		401,891	-	4,452	44,870	404,654	145,882	26,597	6,866	1,035,212	1,267	1,036,479
1404.8428	PLC & Supervisor for Unit NDR	Base		446,321	41,615	38,147	86,147	34,500	131,859	(835)	4,686	782,439	3,448	785,887
1404.8429	PLC & Supervisor for Unit NCR	Base		287,701	2,293	84,845	40,036	224,648	139,427	16,307	3,412	798,669	4,721	803,389
1404.8430	PLC & Supervisor for Unit NTM	Base		629,298	-	(8,484)	134,205	202,736	111,596	-	(781)	1,068,570	781	1,069,351
1404.8431	PLC & Supervisor for Unit NPE/NP/P	Base		589,764	83,278	324,540	112,104	268,866	143,413	557	(3,166)	1,519,356	11,299	1,530,655
1404.8432	PLC & Supervisor for Unit LTP	Base		88,201	25,904	110,411	160,578	51,545	12,885	-	440	449,964	7,693	457,658
1404.8433	PLC & Supervisor for Unit PFE/PFF	Base		101,603	-	(1,122)	154,340	498,158	331,485	214,793	56,379	1,355,636	(4,517)	1,351,119
1404.8434	PLC & Supervisor for Unit PRE/PRF	Base		370,163	-	28,201	167,699	66,552	169,873	34,660	6,909	844,057	19,937	863,994
1404.8435	PLC & Supervisor for Unit PTE/PTF	Base		347,117	6,966	215,218	172,324	207,111	2,123	-	(3,413)	947,446	28,571	976,017
1404.8436	PLC & Supervisor for Unit PQE	Base		495,159	104,004	90,410	2,526	(1,233)	-	-	(83)	690,783	83	690,866
1404.8437	PLC & Supervisor for Unit PAD	Base		173,942	54,649	141,587	342,101	12,154	(6,471)	-	(16)	717,946	16	717,963
1404.8438	PLC & Supervisor for Unit PAR	Base		119,705	10,730	156,396	67,633	3,667	16	-	(493)	357,654	493	358,147
1404.8439	PLC & Supervisor for Unit PSE	Base		192,383	-	1,624	74,443	208,458	31,550	560	(5,748)	503,270	5,748	509,018
1404.8440	PLC & Supervisor for Unit PSF	Base		157,340	-	732	538	44,629	197,256	45,495	10,726	456,716	(10,726)	446,000
1404.8441	PLC & Supervisor for Unit PSI	Base		37,528	27,337	146,901	149,705	2,387	225	-	(617)	698,466	617	699,084
1404.8442	PLC & Supervisor for Unit PSJ	Base		126,782	(9,104)	4,869	1,426	16	117,350	115,136	6,105	362,582	(16,215)	346,367
1404.8443	PLC & Supervisor for Unit GME/GMF	Base		603,074	205,747	292,165	228,121	366,244	354,002	259,268	32,216	2,340,837	51,129	2,391,966
1404.8444	PLC & Supervisor for Unit GMK	Base		90,054	-	60,714	31,167	(48)	12,018	135,288	50,356	379,549	49,701	429,250
1404.8445	PLC & Supervisor for Unit GDE	Base		48,147	29,766	53,365	84,108	169,338	(2,550)	(781)	381,393	382,174	781	382,955
1404.8446	PLC & Supervisor for Unit SXE	Base		-	-	-	-	28,423	98,830	163,807	21,886	312,947	(564)	312,383
1404.8447	PLC & Supervisor for Unit SEK	Base		27,154	8,145	153,667	194,311	119,551	(1,483)	-	(367)	500,979	367	501,346
1404.8448	PLC & Supervisor for Unit SDK	Base		346,318	99,925	263,009	124,692	698	(1,700)	-	(105)	832,837	21,527	854,364
1404.8449	PLC & Supervisor for Unit SCE	Base		-	-	-	-	-	74,027	163,825	114,140	351,992	37,993	389,985
1404.8450	PLC & Supervisor for Unit SMK/STK	Base		-	-	-	7,092	82,179	223,847	132,455	12,618	458,191	(14,013)	444,178
1404.8451	PLC & Supervisor for Unit TGM	Base		-	-	-	-	-	18,968	158,329	113,493	290,790	220,916	511,706
1404.8452	PLC & Supervisor for Unit TGV	Base		77,147	-	(837)	-	-	-	-	-	76,311	-	76,311
1404.8453	PLC & Supervisor for Unit TAS	Base		-	-	-	-	-	-	128,399	129,947	258,345	331,646	589,992
1404.8454	PLC & Supervisor for Unit TCK	Base		-	-	-	-	-	72,957	137,557	6,166	216,679	(131)	216,548
1404.8455	PLC & Supervisor for Unit TCP	Base		45,571	-	1,419	65,509	7,063	8,163	190,797	64,961	383,482	71,220	454,702
1404.8456	PLC & Supervisor for Unit TCL/TGJ	Base		-	-	-	-	-	71,707	208,305	8,268	288,281	18,810	307,091
1404.8457	PLC & Supervisor for Unit TXE	Base		-	-	-	-	-	-	-	-	-	-	-
1404.8458	PLC & Supervisor for Unit LCT	Base		18,923	(555)	15,508	31,884	29,804	77	-	8	95,649	(8)	95,641
1404.8459	PLC & Supervisor for Unit VDQ	Base		-	-	-	-	-	-	-	-	-	-	-
1404.8460	PLC & Supervisor for Unit VDT	Base		-	-	-	-	-	77,311	282,523	23,137	382,971	652	383,623
1404.8461	PLC & Supervisor for Unit VDR/VDU	Base		-	-	-	-	28,947	702	-	(857)	28,792	857	29,649
1404.8485	PLC & Supervisor for Fire Safety	Base		38,426	-	1,906	355	-	1,818	-	(7)	42,498	7	42,505
1404.8486	PLC & Supervisor for LGF	Base		48,648	27,106	29,028	59,598	117,833	158	-	(100)	282,271	23,020	305,291
1404.8487	M&I - PRE/PRF	Base		-	-	-	-	-	-	-	-	-	-	-
1405.8462	PLC & Supervisor for Unit KDD	Base		277,405	19,114	159,656	248,042	104,704	47,576	-	(651)	855,845	7,305	863,150
1405.8463	PLC & Supervisor for Unit KDA	Base		485,179	12,063	65,589	343,480	506,728	280,817	103,131	2,355	1,799,343	13,907	1,813,250
1405.8464	PLC & Supervisor for Unit KDB	Base		32,040	44,286	146,710	150,042	37,699	41,236	-	1,788	453,802	2,094	455,895
1405.8466	PLC & Supervisor for Unit KPA	Base		340,081	67,414	326,491	62,880	124,358	(2,080)	-	(3,843)	915,301	11,237	926,538
1405.8467	PLC & Supervisor for Unit KPB	Base		171,867	17,540	96,147	30,952	(981)	(351)	-	39	315,212	2,364	317,577
1405.8468	PLC & Supervisor for Unit KPC	Base		146,232	45,741	61,245	137,974	(936)	(1,622)	-	-	388,634	2,403	391,037
1405.8469	PLC for Unit LFX	Base		-	-	-	-	45,858	-	-	(3,125)	42,733	3,125	45,858
1405.8470	PLC & Supervisor for Unit KPG	Base		172,630	(139)	1,200	(63)	106,255	221,522	45,640	16,458	563,504	86,671	650,175
1405.8471	PLC & Supervisor for Unit LLP	Base		61,442	2,382	4,894	128,883	230,052	130,350	115,635	3,899	677,537	25,582	703,119
1405.8472	PLC & Supervisor for Unit KCA	Base		295,824	13,960	146,909	22,600	(1,632)	(354)	-	(156)	477,152	3,853	481,004
1405.8473	PLC & Supervisor for Unit KCB	Base		262,667	5,342	37,479	106,881	298,827	(5,350)	-	(493)	705,353	8,811	714,164
1405.8474	PLC & Supervisor for Unit KCC	Base		240,641	8,704	81,031	127,054	83,535	(3,600)	-	(309)	537,056	8,257	545,313
1405.8475	PLC & Supervisor for Unit KCD	Base		327,413	25,166	36,134	4,877	(447)	(37)	-	(123)	392,984	2,526	395,510
1405.8476	PLC & Supervisor for Unit KWD	Base		119,639	6,852	59,600	103,418	44,239	(170)	-	(523)	333,056	3,111	336,167
1405.8477	PLC & Supervisor for Unit KWG	Base		207,276	34,419	109,590	20,817	(813)	(461)	-	(132)	370,696	2,720	373,415
1405.8478	PLC & Supervisor for Unit KDM	Base		199,316	113,215	516,352	393,160	610,074	243,836	73,984	88,947	2,238,884	83,617	2,322,500
1405.8480	PLC & Sup. for Unit KUA/KUB/KUD/KUG/KUH	Base		140,778	38,995	78,661	113,239	7,226	61,194	146,374	4,586	591,054	(23,236)	567,817
1405.8481	PLC & Supervisor for Ventilation	Base		5,762	-	77,666	123,155	155,242	264,417	349,528	15,409	1,090,387	99,207	1,189,594
1405.8482	PLC & Supervisor for Electrical Distribution	Base		129,128	-	(1,922)	71,221	2,106	131,834	179,878	33,911	546,154	(32,584)	513,569
1405.8483	PLC & Supervisor for Fluids	Base		85,564	-	(21)	27,633	226,426	279,063	23,887	47,854	690,406	(34,172)	656,234
1405.8484	PLC & Supervisor for Unit KDR	Base		50,964	-	2,104	-	-	-	-	-	53,068	-	53,068
1405.8486	PLC & Supervisor for LGF	Base		-	-	-	-	-	-	-	-	-	-	-
1405.8490	Simulation & Testing	Base		-	-	-	-	-	-	-	-	-	-	-

Schedule 7.11

CB&IAREVA MOX Services, LLC.
MFF Project Costs - Actual Costs Incurred Through April 2013 by Cost Account and Claim Category

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I] = A+B+...H	[J] = K-I	[K]
				Pre-June 2007	June 2007 - September 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	October 2012 - April 2013	Subtotal Through April 2013	ETC	Total 2012 Rebaseline With Addendum
1405.8496	SPLC Procurement Contract Oversight	Base		-	-	160,138	334,144	575,714	164,956	1,158,715	2,080,821	4,474,488	7,762,619	12,237,107
1405.8497	CGD Embedded Software Evaluation Support	Base		-	-	-	-	-	-	1,936	235,971	237,907	424,094	662,001
1406.8419	Software Analysis & Translation	Base		2,911,338	-	1,391	81	(938)	-	-	-	2,911,871	-	2,911,871
Base Total				\$ 688,059,086	\$ 17,949,470	\$ 60,828,209	\$ 67,578,685	\$ 63,687,430	\$ 50,199,514	\$ 36,673,921	\$ 16,549,871	\$ 1,001,526,186	\$ 49,224,019	\$ 1,050,750,205
MFF Project Total				\$ 811,333,382	\$ 72,557,114	\$ 273,040,220	\$ 353,147,317	\$ 482,582,736	\$ 583,687,078	\$ 708,126,652	\$ 333,004,396	\$ 3,617,478,895	\$ 2,997,022,690	\$ 6,614,501,585

Sources:

[A-G] 2012 contract proposal value as stated in December 2012 PRISM data and adjusted for 2012 Rebaseline Addendums

[H] February 2017 PRISM data

[I],[J] Calculated

[K] 2012 contract proposal value as stated in December 2012 PRISM data and adjusted for 2012 Rebaseline Addendums

CB&I AREVA MOX Services, LLC.
MFFF Project Costs - Timephased 2007 Baseline by Claim Category⁽¹⁾

Schedule 7.2

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I] = A+B+...H	[J]	[K] = I+J
Claim Category	Pre-June 2007	June 2007 - September 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	October 2012 - April 2013	Subtotal Through April 2013	ETC	Total
Option 1 Contract											
Process Units - Direct	\$ 918,474	\$ 2,183,958	\$ 20,419,306	\$ 20,412,573	\$ 34,100,254	\$ 42,139,412	\$ 55,072,317	\$ 25,739,499	\$ 200,985,792	\$ 144,558,092	\$ 345,543,884
Process Units - Hotel Load	36,554,031	13,546,532	43,054,987	38,625,917	46,248,185	77,483,926	58,007,872	37,175,398	350,696,848	448,317,576	799,014,425
MFFF Construction - Title III Engineering	4,515,776	402,249	1,249,276	1,747,548	3,218,917	4,059,916	4,226,005	2,131,025	21,550,712	11,397,949	32,948,661
MFFF Construction - Installation/Materials	44,148,438	5,039,255	25,691,424	52,630,521	92,209,597	119,583,546	171,083,262	80,479,685	590,865,728	471,734,467	1,062,600,195
Construction Management	4,154,454	820,092	2,758,965	3,111,141	3,446,210	3,711,402	6,030,649	3,736,682	27,769,596	33,744,898	61,514,495
Quality Assurance	-	-	-	1,678,607	2,270,625	2,475,183	3,057,505	1,488,989	10,970,909	12,052,145	23,023,054
All Other	32,983,125	3,842,226	17,916,166	25,359,964	20,357,883	16,960,872	18,242,959	19,295,353	154,958,548	299,219,220	454,177,767
Option 1 Subtotal	\$ 123,274,297	\$ 25,834,311	\$ 111,090,125	\$ 143,566,271	\$ 201,851,671	\$ 266,414,257	\$ 315,720,569	\$ 170,046,630	\$ 1,357,798,132	\$ 1,421,024,348	\$ 2,778,822,480
Base Contract	\$ 688,059,086	\$ 9,551,208	\$ 33,853,074	\$ 35,700,752	\$ 34,191,128	\$ 25,864,501	\$ 17,638,573	\$ 6,711,733	\$ 851,570,054	\$ 20,496,225	\$ 872,066,279
MFFF Project Total	\$ 811,333,382	\$ 35,385,519	\$ 144,943,199	\$ 179,267,024	\$ 236,042,799	\$ 292,278,758	\$ 333,359,142	\$ 176,758,364	\$ 2,209,368,186	\$ 1,441,520,572	\$ 3,650,888,759

Sources:

Schedule 7.21

Notes:

(1) For purposes of estimating incurred cost growth in this Claim, the 2007 Baseline to-go costs of \$2,839,555,376 as of June 2007 were timephased based on the 2012 Rebaseline spend by Management Area (see Schedules 7.3, 7.4 and 7.5).

Schedule 7.21

CB&I AREVA MOX Services, LLC.
MFFF Project Costs - Timephased 2007 Baseline by Cost Account and Claim Category⁽¹⁾

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I] = A+B+...H	[J]	[K] = I+J
				Pre-June 2007	June 2007 - September 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	October 2012 - April 2013	Subtotal Through April 2013	ETC	Total
1003.8033	PUDC Procurement & Fabrication Support	Option 1	Process Units - Direct	\$ -	\$ 32,069	\$ 99,597	\$ 139,321	\$ 256,623	\$ 323,671	\$ 336,912	\$ 169,893	\$ 1,358,084	\$ 908,684	\$ 2,266,768
1004.8043	PUDC Site Construction Support	Option 1	Process Units - Direct	42,032	110,109	341,968	478,362	881,124	1,111,333	1,156,797	583,332	4,705,057	3,119,995	7,825,052
1004.8045	Software	Option 1	Process Units - Direct	-	151,419	470,268	657,833	1,211,703	1,528,282	1,590,804	802,186	6,412,495	4,290,553	10,703,048
1005.8056	PUDC Startup Support	Option 1	Process Units - Direct	-	89,853	279,059	390,360	719,029	906,888	943,989	476,020	3,805,198	2,546,029	6,351,227
1600.8601	Management / Admin	Option 1	Process Units - Direct	119,976	24,424	632,994	252,156	350,056	354,050	318,982	134,692	2,187,330	522,702	2,710,032
1600.8602	Project Controls	Option 1	Process Units - Direct	82,657	28,491	738,389	294,140	408,341	413,000	372,094	157,119	2,494,232	609,733	3,103,965
1600.8603	QA / QC	Option 1	Process Units - Direct	108,426	(72)	(1,873)	(746)	(1,036)	(1,048)	(944)	(399)	102,309	(1,547)	100,762
1601.8611	Business Travel	Option 1	Process Units - Direct	39,185	34,587	896,381	357,077	495,713	501,369	451,710	190,738	2,966,760	740,197	3,706,956
1602.8621	Supervision / Admin	Option 1	Process Units - Direct	103,863	18,965	491,495	195,789	271,805	274,906	247,677	104,588	1,709,083	405,858	2,114,941
1603.8631	Supervision / Admin	Option 1	Process Units - Direct	422,335	103,688	2,687,237	1,070,471	1,486,085	1,354,170	1,354,170	571,807	9,198,835	2,219,017	11,417,852
1603.8641	Management / Admin	Option 1	Process Units - Direct	-	(2,560)	(66,356)	(26,433)	(36,696)	(37,114)	(33,438)	(14,120)	(216,177)	(54,794)	(271,511)
1604.8641	Team Center Initiative	Option 1	Process Units - Direct	-	2,560	66,356	26,433	36,696	37,114	33,438	14,120	216,177	54,794	271,511
1623.8785	Process Assembly Facilities	Option 1	Process Units - Direct	-	272,616	7,065,261	2,814,474	3,907,202	3,951,784	3,560,371	1,503,391	23,075,099	5,834,219	28,909,318
1701.8701	KCB - Homogenization - Sampling	Option 1	Process Units - Direct	-	9,571	48,793	99,955	175,124	227,112	324,920	152,846	1,038,321	895,195	1,934,236
1701.8702	KCC - PuO2 Decanning	Option 1	Process Units - Direct	-	9,522	48,545	99,447	174,233	225,958	323,268	152,069	1,033,042	891,360	1,924,402
1701.8703	KDA - PuO2 Decanning	Option 1	Process Units - Direct	-	17,949	91,508	187,461	328,435	425,936	609,369	286,655	1,947,312	1,680,237	3,627,549
1701.8704	KDM - Pre-Polishing Milling	Option 1	Process Units - Direct	-	46,822	238,711	489,014	856,761	1,111,104	1,589,611	747,773	5,079,795	4,383,096	9,462,891
1701.8705	KDR - Recanning	Option 1	Process Units - Direct	-	9,407	47,959	98,246	172,129	223,229	319,364	150,233	1,020,566	880,595	1,901,161
1701.8706	KPA GB 4010	Option 1	Process Units - Direct	-	4,970	25,340	51,911	90,948	117,948	168,743	79,379	539,239	465,281	1,004,520
1701.8777	KPG - Sampling Automatic	Option 1	Process Units - Direct	-	11,379	58,011	118,838	208,207	270,017	386,302	181,721	1,234,474	1,065,165	2,299,639
1701.8795		Option 1	Process Units - Direct	-	(13,788)	(70,295)	(144,005)	(252,299)	(327,198)	(468,108)	(220,204)	(1,495,897)	(1,290,594)	(2,786,631)
1702.8707	KCB 5000 Manufacturing	Option 1	Process Units - Direct	-	3,326	16,957	34,737	60,861	78,928	112,919	53,119	360,847	311,357	672,204
1702.8712	VDR - Filter Dismantling	Option 1	Process Units - Direct	-	8,750	44,612	91,390	160,118	207,651	297,078	139,749	949,350	819,145	1,768,495
1702.8713	VDU - Maintenance & Mechanical Dismantling	Option 1	Process Units - Direct	-	5,466	28,687	59,177	103,679	134,458	192,364	90,420	614,721	530,412	1,145,133
1703.8715	DCM - PuO2 3013 Storage	Option 1	Process Units - Direct	-	10,073	51,353	105,199	184,311	239,027	341,966	160,865	1,092,794	942,917	2,035,711
1703.8716	DCP - PuO2 Receiving	Option 1	Process Units - Direct	-	31,979	163,037	333,992	585,159	758,674	1,085,690	510,722	3,469,452	2,993,614	6,463,066
1703.8717	KDA - PuO2 Decanning (EQ - 6000 Density Measurement)	Option 1	Process Units - Direct	-	3,166	16,141	33,067	57,933	75,132	107,488	50,564	343,492	296,381	639,873
1704.8720	SDK - Rod Inspection and Sorting	Option 1	Process Units - Direct	-	14,555	74,203	152,009	266,322	345,385	494,127	232,444	1,579,044	1,362,477	2,941,521
1704.8721	SEK - Helium Leak Test	Option 1	Process Units - Direct	-	3,608	18,393	37,679	66,014	85,611	122,480	57,616	391,399	337,719	729,118
1705.8722	GMK - Rod Tray Loading	Option 1	Process Units - Direct	-	4,860	24,777	50,757	88,927	115,326	164,993	77,615	527,254	454,941	982,195
1705.8723	SCE - Rod Scanning	Option 1	Process Units - Direct	-	12,095	61,666	126,326	221,325	287,029	410,640	193,170	1,312,251	1,132,275	2,444,526
1705.8724	SMK - Rod Tray Handling	Option 1	Process Units - Direct	-	10,453	53,290	109,168	191,264	248,044	354,867	166,934	1,134,021	978,488	2,112,509
1705.8725	STK - Rod Storage	Option 1	Process Units - Direct	-	9,220	47,007	96,297	168,714	218,800	313,028	147,252	1,000,318	863,124	1,863,442
1705.8726	SXE - X Ray Inspection	Option 1	Process Units - Direct	-	10,371	52,872	108,312	189,765	246,100	352,085	165,625	1,125,130	970,817	2,095,947
1705.8727	TAS - Assembly Handling and Storage	Option 1	Process Units - Direct	-	5,508	28,083	57,529	100,792	130,714	187,007	87,971	597,605	515,642	1,113,247
1705.8728	TCK - Assembly Dry Cleaning	Option 1	Process Units - Direct	-	1,795	9,150	18,744	32,840	42,589	60,931	28,663	194,713	168,007	362,720
1705.8729	TCL - Assembly Final Inspection	Option 1	Process Units - Direct	-	9,940	50,676	103,813	181,883	235,678	337,461	158,746	1,078,396	930,493	2,008,889
1705.8730	TCJ - Reserve PH	Option 1	Process Units - Direct	-	9,947	50,713	103,889	182,015	236,049	337,705	158,861	1,079,178	931,168	2,010,346
1705.8731	TCP - Assembly Dimensional Inspection	Option 1	Process Units - Direct	-	7,961	40,387	83,145	145,671	188,916	270,274	127,140	863,693	745,237	1,608,930
1705.8732	TGM - Assembly Mockup Loading	Option 1	Process Units - Direct	-	18,068	92,114	188,702	330,609	428,756	613,403	288,553	1,960,205	1,691,361	3,651,566
1705.8733	TGV - Assembly Mounting	Option 1	Process Units - Direct	-	6,437	32,818	67,230	117,788	152,755	218,540	102,804	698,371	602,589	1,300,960
1706.8734	PSE - Green Pellet Storage	Option 1	Process Units - Direct	-	14,821	75,561	154,792	271,199	351,709	503,176	236,700	1,607,959	1,387,426	2,995,385
1706.8735	PSF - Sintering Pellet Storage	Option 1	Process Units - Direct	-	15,139	77,180	158,109	277,009	359,244	513,956	241,771	1,642,408	1,417,151	3,059,559
1706.8736	PSI - Scrap Pellet Storage	Option 1	Process Units - Direct	-	14,660	74,739	153,107	268,246	347,880	497,697	234,123	1,590,452	1,372,319	2,962,771
1706.8737	PSJ - Ground & Sorted Pellet Storage	Option 1	Process Units - Direct	-	14,909	76,010	155,711	272,809	353,797	506,163	238,105	1,617,505	1,395,663	3,013,168
1707.8738	Lab Equip - LRD/LPG/LBT/LAC/CLN/KLL/KLK/KLH	Option 1	Process Units - Direct	-	25,273	128,850	263,958	462,460	599,749	858,036	403,631	2,741,957	2,365,895	5,107,852
1707.8739	Lab Equip - LME/LAU/FLT	Option 1	Process Units - Direct	-	12,548	63,975	131,058	229,615	297,781	426,023	200,406	1,361,407	1,174,688	2,536,095
1707.8740	Lab Equip - LSR/LCP/KLJ	Option 1	Process Units - Direct	-	32,734	166,886	341,877	598,975	776,790	1,111,322	522,780	3,351,365	3,064,291	6,615,656
1707.8741	Lab Equip - LPS/LET/LER/LDS/KLM/KLF/KLB/KLC/KLD	Option 1	Process Units - Direct	-	33,784	172,238	352,840	618,182	801,700	1,146,959	539,544	3,665,248	3,162,555	6,827,803
1707.8742	Lab Equip - KLO/KLI/KLG/KLA/KLE	Option 1	Process Units - Direct	-	35,326	180,099	368,944	646,396	838,289	1,199,306	564,168	3,832,528	3,306,893	7,139,421
1707.8743	Lab Equip - LSC/LLI	Option 1	Process Units - Direct	-	2,074	10,571	21,656	37,942	49,206	70,396	33,115	224,960	194,107	419,067
1707.8744	Lab Equip - LFX	Option 1	Process Units - Direct	-	6,973	35,548	72,822	127,586	165,462	236,720	111,356	756,466	652,716	1,409,182
1708.8745	DCE - PUO2 Buffer Storage	Option 1	Process Units - Direct	-	10,752	54,816	112,293	195,740	265,026	371,713	171,713	1,166,985	1,006,500	2,173,485
1708.8746	GDE - Rod Decadding	Option 1	Process Units - Direct	-	5,163	26,320	53,919	94,467	122,511	175,272	82,450	560,103	483,285	1,043,388
1708.8747	GME - Rod Cladding and Decontamination	Option 1	Process Units - Direct	-	43,981	224,224	459,338	804,768	1,043,677	1,493,146	702,394	4,771,528	4,117,109	8,888,637
1708.8748	PAD - Preplanning	Option 1	Process Units - Direct	-	2,959	14,985	30,698	53,783	69,749	99,787	46,941	318,881	275,147	594,028
1708.8749	PAR - Preplanning	Option 1	Process Units - Direct	-	2,748	14,008	28,696	50,276	65,201	93,281	43,880	298,090	257,206	555,296
1708.8750	PML - Pellet Handling	Option 1	Process Units - Direct	-	33,776	172,196	352,755	618,033	801,506	1,146,682	539,413	3,664,361	3,161,791	6,826,152
1708.8751	PQE - Quality Control & Manual Sorting	Option 1	Process Units - Direct	-	16,332	83,262	170,568	298,838	387,553	554,456	260,823	1,771,833	1,528,824	3,300,657
1708.8752	PRE - Pellet Grinding	Option 1	Process Units - Direct	-	14,048	71,619	146,716	257,048	333,357	476,920	224,349	1,524,057	1,315,031	2,839,088
1708.8753	PRF - Pellet Grinding	Option 1	Process Units - Direct	-	14,048	71,619	146,716	257,048	333,357	476,920	224,349	1,524,057	1,315,031	2,839,088
1708.8754	PTF - Pellet Inspection & Sorting	Option 1	Process Units - Direct	-	6,050	30,843	63,184	110,699	143,562	205,389	96,617	656,344	566,326	1,222,670
1708.8755	PTF - Pellet Inspection & Sorting	Option 1	Process Units - Direct	-	6,021	30,698	62,886	110,178	142,886	204,421	96,162	653,252	563,658	1,216,910
1709.8756	DDP - UO2 Drum Emptying	Option 1	Process Units - Direct	-	6,242	31,826	65,197	114,226	148,136	211,931	99,695	677,252	584,367	1,261,619
1709.8757	LCT - Test Line (part of laboratory)	Option 1	Process Units - Direct	-	12,943	65,987	135,178	236,835	307,143	439,417	206,707	1,404,212	1,211,622	2,615,834

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CB&I AREVA MOX Services, LLC.
MFFF Project Costs - Timephased 2007 Baseline by Cost Account and Claim Category⁽¹⁾

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I] = A+B+...H	[J]	[K] = I+J
				Pre-June 2007	June 2007 - September 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	October 2012 - April 2013	Subtotal Through April 2013	ETC	Total
1709.8758	NBX - Primary Blend Ball Milling	Option 1	Process Units - Direct	-	6,923	35,293	72,300	126,670	164,274	235,021	110,557	751,037	648,031	1,399,068
1709.8759	NBY - Scrap Ball Milling	Option 1	Process Units - Direct	-	6,923	35,293	72,300	126,670	164,274	235,021	110,557	751,037	648,031	1,399,068
1709.8760	NCR - Scrap Processing	Option 1	Process Units - Direct	-	26,196	133,556	273,598	479,349	621,652	889,372	418,372	2,842,096	2,452,299	5,294,395
1709.8761	NDD - PUOZ Can Receiving and Emptying	Option 1	Process Units - Direct	-	7,810	39,817	81,568	142,909	185,334	265,150	124,730	847,318	731,107	1,578,425
1709.8762	NDP - Primary Dosing	Option 1	Process Units - Direct	-	20,750	105,787	216,711	379,681	492,396	704,450	331,382	2,251,156	1,942,407	4,193,563
1709.8763	NDS - Final Dosing	Option 1	Process Units - Direct	-	25,343	129,208	264,690	463,741	601,411	860,414	404,749	2,749,556	2,372,451	5,122,007
1709.8764	NTM - Jar Storage and Handling	Option 1	Process Units - Direct	-	33,233	169,432	347,092	608,112	788,640	1,128,275	530,754	3,605,539	3,111,035	6,716,574
1709.8765	NXR - Powder Auxiliary	Option 1	Process Units - Direct	-	10,007	51,017	104,513	183,108	237,466	339,733	159,815	1,085,659	936,760	2,022,419
1710.8766	NPG - Homogenization & Pelletizing	Option 1	Process Units - Direct	-	19,381	98,811	202,420	354,644	459,926	657,997	309,530	2,102,708	1,814,320	3,917,028
1710.8767	NPH - Homogenization & Pelletizing	Option 1	Process Units - Direct	-	19,110	97,430	199,592	349,688	453,498	648,802	305,204	2,103,324	1,788,966	3,862,290
1710.8768	NPI - Homogenization & Pelletizing	Option 1	Process Units - Direct	-	19,166	97,715	200,175	350,710	454,824	650,698	306,096	2,107,383	1,794,193	3,873,576
1711.8769	KLA - Precipitation - Filtration - Oxidation	Option 1	Process Units - Direct	-	11,604	59,159	121,190	212,328	275,361	393,947	185,318	1,258,906	1,086,245	2,345,151
1711.8770	KCB GB1000 - Homogenization - Sampling	Option 1	Process Units - Direct	-	4,771	24,324	49,830	87,302	113,220	161,979	76,197	517,622	446,630	964,252
1711.8771	KDA - PUOZ Decanning	Option 1	Process Units - Direct	-	2,004	10,216	20,928	36,666	47,551	68,029	32,002	217,395	187,579	404,974
1711.8772	KDB - Dissolution	Option 1	Process Units - Direct	-	12,567	64,069	131,249	229,951	298,216	426,645	200,699	1,363,395	1,176,404	2,539,799
1711.8773	KDD - Dissolution of Chlorinated Feed	Option 1	Process Units - Direct	-	23,575	120,194	246,225	431,390	559,455	800,389	376,513	2,557,741	2,206,944	4,764,685
1711.8774	KDM - Pre-Polishing Milling (GB6400/7400)	Option 1	Process Units - Direct	-	3,893	19,847	40,658	71,234	92,381	132,166	62,173	422,354	364,427	786,781
1711.8775	KPA GB4000	Option 1	Process Units - Direct	-	9,543	48,652	99,666	174,617	226,455	323,980	152,404	1,035,316	893,321	1,928,637
1711.8776	KPB GB1000	Option 1	Process Units - Direct	-	3,370	17,183	35,200	61,671	79,979	114,423	53,826	365,652	315,503	681,155
1711.8778	LLP - Pneumatic Transfer (33mm, PUO2 cans) Equipment	Option 1	Process Units - Direct	-	11,457	58,412	119,661	209,649	271,887	388,977	182,980	1,243,024	1,072,542	2,315,566
1711.8779	LTP - Pneumatic Transfer (76mm, PUO2 cans) Equipment	Option 1	Process Units - Direct	-	5,346	27,257	55,837	97,828	126,870	181,508	85,383	580,029	500,478	1,080,507
1711.8780	NTP - Pneumatic Transfer (133mm, PUO2 cans) Equipment	Option 1	Process Units - Direct	-	9,636	49,125	100,635	176,314	228,655	327,128	153,885	1,045,377	902,002	1,947,379
1712.8781	NPF - Additives Preparation	Option 1	Process Units - Direct	-	7,077	36,082	73,917	129,504	167,949	240,278	113,030	767,836	662,527	1,430,363
1712.8782	PFE/PFF - Sintering Furnace	Option 1	Process Units - Direct	-	123,453	629,396	1,289,358	2,259,978	2,929,593	4,191,248	1,971,615	13,393,642	11,556,691	24,950,333
1712.8783	TXE - Assembly Packaging	Option 1	Process Units - Direct	-	5,202	26,321	54,331	95,189	123,447	176,611	83,080	564,381	486,976	1,051,357
1712.8784	DRS - UO2 Receiving and Storage	Option 1	Process Units - Direct	-	755	3,850	7,888	13,819	17,922	25,640	12,061	81,935	70,698	152,633
1712.8786	PFF - Sintering Furnace	Option 1	Process Units - Direct	-	0	0	0	0	0	1	0	2	2	4
1713.8790	Process Unit Support	Option 1	Process Units - Direct	-	12,467	63,558	130,202	228,116	295,836	423,240	199,098	1,352,516	1,167,017	2,519,533
1714.8708	KCD - Oxalic Mother Liquors Recovery Unit	Option 1	Process Units - Direct	-	4,245	21,641	44,332	77,671	100,729	144,108	67,790	460,516	397,356	857,872
1714.8709	KPA (GB2000, 2010, 3000, 8000, 8510) Purification Cycle	Option 1	Process Units - Direct	-	9,677	49,334	101,063	177,064	229,629	328,520	154,540	1,049,826	905,842	1,955,668
1714.8710	KPC - Nitric Acid Recovery Liquid Ring Pump GB	Option 1	Process Units - Direct	-	4,528	23,083	47,288	82,849	107,444	153,716	72,310	491,217	423,846	915,063
1714.8711	KWD - Aqueous Waste Reception	Option 1	Process Units - Direct	-	6,235	31,786	65,115	114,082	147,949	211,665	99,570	676,401	583,631	1,260,032
1714.8714	KPB (GB2000) Solvent Recovery Unit	Option 1	Process Units - Direct	-	2,013	10,265	21,028	36,842	47,779	68,356	32,155	218,440	188,480	406,920
1715.8718	VDQ Waste Storage	Option 1	Process Units - Direct	-	15,187	77,429	158,618	277,901	360,401	515,610	242,550	1,647,696	1,421,712	3,069,408
1715.8719	VDT Waste Nuclear Count - Drum Hdling & NDA P	Option 1	Process Units - Direct	-	4,403	22,449	45,987	80,571	104,489	149,488	70,321	477,709	412,190	889,899
1716.8791	Assembly BOAs Accounts	Option 1	Process Units - Direct	-	52,593	268,133	549,287	962,360	1,248,052	1,785,537	839,939	5,705,899	4,923,330	10,629,229
1716.8795	Long Lead Procurements	Option 1	Process Units - Direct	-	79,419	404,899	829,461	1,453,231	1,884,647	2,696,287	1,268,367	8,616,310	7,434,575	16,050,885
1716.8796	ATC Spares Procurements	Option 1	Process Units - Direct	-	23,875	121,721	249,354	436,872	566,565	881,298	381,298	2,590,248	2,234,992	4,825,240
1717.8792	Self-Perform Suspense Accounts	Option 1	Process Units - Direct	-	1,574	8,432	16,435	28,794	37,341	53,423	25,131	170,719	147,305	318,024
1745.4530	MP Sintering Furnaces	Option 1	Process Units - Direct	-	5,610	28,599	58,587	102,646	133,118	190,447	89,589	608,597	525,127	1,133,724
Process Units - Direct Total				\$ 918,474	\$ 2,183,958	\$ 20,419,306	\$ 20,412,573	\$ 34,100,254	\$ 42,139,412	\$ 55,072,317	\$ 25,739,499	\$ 200,985,792	\$ 144,558,092	\$ 345,543,884
0601.6000	Project Office Operations	Option 1	Process Units - Hotel Load	\$ 1,464,941	\$ 133,999	\$ 430,641	\$ 406,117	\$ 411,042	\$ 374,643	\$ 447,913	\$ 265,900	\$ 3,935,195	\$ 2,492,904	\$ 6,428,099
0601.6001	Communications	Option 1	Process Units - Hotel Load	214,671	103,446	332,450	313,518	317,320	289,220	345,784	205,272	2,121,682	1,924,495	4,046,177
0601.6002	Special Projects	Option 1	Process Units - Hotel Load	209,586	0	0	0	0	0	0	0	209,586	0	209,586
0601.6004	Project Off-Site Operations	Option 1	Process Units - Hotel Load	-	57,934	186,184	175,582	177,711	161,974	193,652	114,960	1,067,996	1,077,788	2,145,784
0601.6005	Projects Oversight	Option 1	Process Units - Hotel Load	-	179,015	575,308	542,547	549,125	500,499	598,383	355,226	3,300,103	3,330,362	6,630,465
0601.6009	Relocations	Option 1	Process Units - Hotel Load	863,111	266,397	856,134	807,381	817,170	744,808	890,471	528,622	5,774,095	4,956,011	10,730,106
0602.6010	Project Controls	Option 1	Process Units - Hotel Load	2,292,769	562,297	1,807,082	1,704,177	1,724,839	1,572,101	1,879,560	1,115,788	12,658,613	10,460,887	23,119,500
0602.6011	Risk Management	Option 1	Process Units - Hotel Load	173,642	19,391	62,318	58,769	59,482	54,214	64,817	38,478	531,111	360,747	891,857
0603.6020	QA Program Management & Administration	Option 1	Process Units - Hotel Load	210,098	33,519	107,723	101,589	102,821	93,716	112,044	66,514	828,024	623,991	1,451,615
0603.6021	Quality Engineering	Option 1	Process Units - Hotel Load	388,987	62,888	202,105	190,596	192,907	175,825	210,211	124,790	1,548,309	1,169,952	2,718,261
0603.6022	Audit & Surveillance	Option 1	Process Units - Hotel Load	135,495	33,584	102,930	101,784	103,018	93,895	112,259	66,464	739,607	624,788	1,379,395
0603.6023	Quality Control - Labor	Option 1	Process Units - Hotel Load	173,426	54,104	173,876	163,974	165,962	180,849	107,360	170,188	1,006,536	2,177,354	3,183,890
0603.6024	QA / QC Assembly Group Support	Option 1	Process Units - Hotel Load	-	20,935	67,280	63,449	64,218	58,531	69,978	41,542	385,933	389,472	775,405
0604.6030	PS&A Administrative Support	Option 1	Process Units - Hotel Load	128,264	336,572	1,081,657	1,020,061	1,032,430	941,005	1,125,040	667,872	6,332,901	6,261,527	12,594,428
0604.6031	Human Resources	Option 1	Process Units - Hotel Load	904,789	384,929	1,237,064	1,166,619	1,180,764	1,076,204	1,286,680	763,829	8,000,877	7,161,151	15,162,029
0604.6032	Training	Option 1	Process Units - Hotel Load	431,930	211,648	680,183	641,449	649,227	591,736	497,463	419,981	4,333,618	3,937,461	8,271,079
0604.6033	Information and Personnel Security	Option 1	Process Units - Hotel Load	353,154	217,389	698,633	658,849	666,838	607,788	726,654	431,373	4,360,678	4,044,268	8,404,946
0604.6034	Record Center	Option 1	Process Units - Hotel Load	311,441	202,250	649,982	612,968	620,401	565,463	676,051	401,333	4,039,889	3,762,634	7,802,523
0604.6035	Internal Communication	Option 1	Process Units - Hotel Load	65,198	(12,901)	(41,461)	(39,100)	(39,574)	(36,070)	(43,124)	(25,600)	(172,631)	(240,010)	(412,642)
0604.6036	Accounting, Treasury & Invoice Operations	Option 1	Process Units - Hotel Load	975,847	298,977	960,838	906,123	917,110	835,897	999,376	593,273	6,487,441	5,562,129	12,049,569
0604.6037	Asset Management	Option 1	Process Units - Hotel Load	365,002	(137)	(441)	(416)	(421)	(384)	(459)	(272)	362,471	(2,554)	359,916
0604.6038	Facility Management	Option 1	Process Units - Hotel Load	2,161,593	39,805	127,922	120,638	122,100	111,288	133,053	78,986	2,895,385	740,520	3,635,905
0604.6045	Gateway Project	Option 1	Process Units - Hotel Load	-	(540)	(1,735)	(1,637)	(1,656)	(1,510)	(1,805)	(1,071)	(9,954)	(10,046)	(20,000)

Schedule 7.21

CB&I AREVA MOX Services, LLC.
MFFF Project Costs - Timephased 2007 Baseline by Cost Account and Claim Category⁽¹⁾

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I] = A+B+...+H	[J]	[K] = I+J
				Pre- June 2007	June 2007 - September 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	October 2012 - April 2013	Subtotal Through April 2013	ETC	Total
0604.6046	Shaw Nuclear Exchange	Option 1	Process Units - Hotel Load	-	540	1,735	1,637	1,656	1,510	1,805	1,071	9,954	10,046	20,000
0604.6047	Legal Expenses	Option 1	Process Units - Hotel Load	-	228,487	734,300	692,485	700,881	638,816	763,751	453,396	4,212,116	4,250,736	8,462,852
0604.6048	EMC Corporation Matter	Option 1	Process Units - Hotel Load	-	42	135	127	129	117	140	83	774	781	1,555
0604.6049	952.204-77 Comp Security	Option 1	Process Units - Hotel Load	-	24	76	71	72	66	79	47	435	438	873
0605.6040	Contract Management & Administration	Option 1	Process Units - Hotel Load	1,464,466	408,212	1,311,891	1,237,185	1,252,185	1,141,301	1,364,508	810,031	8,989,779	7,594,312	16,584,091
0606.6050	Procurement	Option 1	Process Units - Hotel Load	381,335	90,289	290,167	273,643	276,961	301,805	252,435	179,164	2,045,800	1,679,726	3,725,526
0606.6051	Infrastructure Procurement	Option 1	Process Units - Hotel Load	285,482	105,485	339,003	319,698	323,574	294,921	352,599	209,318	2,230,080	1,962,428	4,192,508
0606.6052	Construction Procurement	Option 1	Process Units - Hotel Load	416,970	134,244	431,426	406,858	411,792	375,326	448,730	266,385	2,891,732	2,497,452	5,389,184
0606.6053	Process Equipment Procurement	Option 1	Process Units - Hotel Load	359,153	228,191	733,349	691,588	699,974	637,989	762,762	452,809	4,565,816	4,245,233	8,811,049
0606.6054	Process Unit Procurement	Option 1	Process Units - Hotel Load	154,747	7,527	24,189	22,811	23,088	21,043	25,159	14,935	293,499	140,024	433,523
0606.6055	Property Management	Option 1	Process Units - Hotel Load	-	119,136	382,875	361,072	365,450	333,088	398,231	236,407	2,196,258	2,216,396	4,412,654
0606.6056	Employment Eligibility Verifications	Option 1	Process Units - Hotel Load	-	65	208	196	199	181	217	129	1,195	1,205	2,400
0606.6057	Engineered Equipment Group	Option 1	Process Units - Hotel Load	-	13,448	43,218	40,757	41,251	37,598	44,951	26,685	247,907	250,180	498,087
0606.6069	Materials Management	Option 1	Process Units - Hotel Load	-	6,156	19,782	18,656	18,882	17,210	20,576	12,215	113,477	114,517	227,994
0607.6060	IT Support	Option 1	Process Units - Hotel Load	1,994,322	194,409	624,781	589,203	596,347	543,539	649,840	385,773	5,578,214	3,616,751	9,194,965
0607.6061	IT Other Direct Costs (ODCs)	Option 1	Process Units - Hotel Load	1,588,135	371,992	1,195,489	1,127,411	1,141,081	1,040,035	1,243,437	738,158	8,445,739	6,920,481	15,366,220
0607.6062	Team Center Initiative	Option 1	Process Units - Hotel Load	-	53,991	173,514	163,633	165,617	150,951	180,473	107,137	959,515	1,004,440	1,963,955
0611.6090	Project Systems Assessment - NNSA (OPC)	Option 1	Process Units - Hotel Load	-	13,499	43,384	40,913	41,409	37,743	45,124	26,788	248,860	251,142	500,002
MA 06 - Subtotal				\$ 18,468,553	\$ 5,181,237	\$ 16,651,195	\$ 15,702,983	\$ 15,893,978	\$ 14,485,981	\$ 17,319,037	\$ 10,281,330	\$ 113,983,694	\$ 96,390,902	\$ 210,374,596
1000.8001	Management / Admin	Option 1	Process Units - Hotel Load	343,953	116,442	361,637	505,875	931,803	1,175,253	1,233,332	616,883	5,275,179	3,299,447	8,574,626
1000.8002	Engineering Services Project Controls	Option 1	Process Units - Hotel Load	765,046	39,950	124,074	173,561	319,692	403,217	419,712	211,646	2,456,898	1,132,006	3,588,904
1000.8003	Engineering Assurance	Option 1	Process Units - Hotel Load	569,105	20,995	65,204	91,211	168,007	211,902	220,571	111,226	1,458,222	594,902	2,053,124
1000.8004	Technical Coordination	Option 1	Process Units - Hotel Load	307,857	39,473	122,933	171,489	315,876	398,404	414,703	209,120	1,979,514	1,118,494	3,098,008
1000.8005	Document Management	Option 1	Process Units - Hotel Load	211,687	8,603	26,717	37,373	68,840	86,826	90,378	45,574	575,997	243,757	819,754
1000.8006	Engineering Training	Option 1	Process Units - Hotel Load	-	49,858	154,845	216,604	398,977	503,217	523,803	264,135	2,111,439	1,412,748	3,524,187
1001.8011	Business Travel	Option 1	Process Units - Hotel Load	-	58,846	183,070	256,088	471,704	594,945	619,284	312,283	2,496,319	1,670,269	4,166,588
1001.8012	Temporary Assignments	Option 1	Process Units - Hotel Load	139,159	(196)	(608)	(851)	(1,567)	(1,976)	(2,057)	(1,037)	130,867	(5,548)	125,319
1001.8019	Other ODCs	Option 1	Process Units - Hotel Load	-	123,106	382,333	534,826	985,129	1,242,511	1,293,341	652,186	5,213,432	3,488,268	8,701,700
1002.8021	Supervision / Admin	Option 1	Process Units - Hotel Load	296,516	15,036	46,697	65,321	120,320	151,755	157,963	79,655	933,262	426,043	1,359,305
1002.8022	Chemical	Option 1	Process Units - Hotel Load	-	4,847	15,054	21,058	38,787	48,921	50,923	25,679	205,268	137,344	342,612
1002.8023	Mechanical	Option 1	Process Units - Hotel Load	-	2,457	7,632	10,676	19,665	24,803	25,818	13,019	104,072	69,633	173,705
1002.8024	Laboratory	Option 1	Process Units - Hotel Load	-	1,474	4,578	6,404	11,796	14,878	15,487	7,809	62,427	41,769	104,196
1002.8025	Balance of Plant (BOP)	Option 1	Process Units - Hotel Load	-	302	937	1,311	2,414	3,045	3,169	1,598	12,775	8,548	21,323
1002.8026	Safety	Option 1	Process Units - Hotel Load	-	2,249	6,983	9,769	17,993	22,694	23,623	11,912	95,223	63,713	158,936
1002.8027	Reference Plant Support	Option 1	Process Units - Hotel Load	-	381	1,182	1,654	3,046	3,842	3,999	2,017	16,120	10,785	26,905
1003.8031	Supervision / Admin	Option 1	Process Units - Hotel Load	-	71,169	221,031	309,188	569,513	718,308	747,694	377,036	3,013,939	2,016,604	5,030,543
1003.8032	Civil / Structural	Option 1	Process Units - Hotel Load	-	38,084	118,278	165,453	304,758	384,382	400,106	201,760	1,612,821	1,079,126	2,691,947
1003.8034	Electrical / I&C Site Construction Support	Option 1	Process Units - Hotel Load	-	67,931	210,977	295,124	543,607	685,634	713,683	359,885	2,876,843	1,924,874	4,801,717
1003.8035	Chemical-Construction Support	Option 1	Process Units - Hotel Load	-	44,094	136,943	191,562	352,851	445,039	463,245	233,598	1,867,333	1,249,418	3,116,751
1003.8036	Mechanical - Construction Support	Option 1	Process Units - Hotel Load	-	40,493	125,760	175,919	324,035	408,695	425,415	214,522	1,714,838	1,147,386	2,862,224
1003.8037	Plant Configuration Site Construction Support	Option 1	Process Units - Hotel Load	364,955	72,163	224,117	313,506	577,466	728,340	758,136	382,301	3,420,983	2,044,766	5,465,749
1003.8038	Engineering Mechanics - Site Construction Support	Option 1	Process Units - Hotel Load	-	22,475	69,801	97,641	179,852	226,841	236,121	119,067	951,799	636,841	1,588,640
1004.8041	Supervision / Admin	Option 1	Process Units - Hotel Load	191,043	21,767	67,603	94,566	174,186	219,696	228,683	115,317	1,112,861	616,782	1,729,643
1004.8042	Civil / Structural	Option 1	Process Units - Hotel Load	196,981	23,761	73,795	103,228	190,142	239,820	249,631	125,880	1,203,238	673,279	1,876,517
1004.8044	Electrical / I&C Procurement and Fabrication Support	Option 1	Process Units - Hotel Load	-	16,897	52,477	73,408	135,214	170,541	177,518	89,516	715,570	478,783	1,194,353
1004.8046	Chemical-Procurement/Fabrication Support	Option 1	Process Units - Hotel Load	-	95,851	297,688	416,420	767,029	967,430	1,007,007	507,798	4,059,222	2,715,996	6,775,218
1004.8047	Mechanical - Procurement/Fabrication Support	Option 1	Process Units - Hotel Load	-	9,406	29,211	40,862	75,266	94,930	98,814	49,828	366,511	266,511	633,022
1004.8048	Plant Configuration - Construction, Procurement & Fabrication Support	Option 1	Process Units - Hotel Load	-	42,200	131,062	183,336	337,697	425,927	443,351	223,566	1,787,139	1,195,762	2,982,901
1004.8049	Equipment Qualification	Option 1	Process Units - Hotel Load	-	70,138	217,830	304,711	561,266	707,907	736,867	371,576	2,970,295	1,987,403	4,957,698
1005.8051	Supervision / Admin	Option 1	Process Units - Hotel Load	-	14,808	45,989	64,332	118,497	149,456	155,570	78,448	627,099	419,588	1,046,687
1005.8052	Mechanical - Startup & Operations Support	Option 1	Process Units - Hotel Load	51,174	58,850	182,771	255,669	470,932	593,971	618,270	311,772	2,543,407	1,667,335	4,210,942
1005.8053	Electrical / IC Startup and Operations Support	Option 1	Process Units - Hotel Load	46,882	96,481	299,645	419,158	772,073	973,790	1,013,628	511,137	4,132,768	2,733,853	6,866,646
1005.8054	Civil/Structural Startup Support	Option 1	Process Units - Hotel Load	-	9,113	28,302	39,590	72,923	95,778	98,975	48,277	368,211	258,214	626,425
1005.8055	Engineering Mechanics Startup Support	Option 1	Process Units - Hotel Load	-	11,130	34,567	48,353	89,065	112,335	116,931	58,964	471,345	315,374	786,719
1005.8057	Chemical/Mechanical Engineering Startup Support	Option 1	Process Units - Hotel Load	-	28,852	89,607	125,347	230,884	291,207	303,120	152,853	1,221,871	817,545	2,039,416
1005.8058	Software Modifications	Option 1	Process Units - Hotel Load	-	163,955	509,201	712,295	1,312,020	1,654,808	1,722,505	868,599	6,943,382	4,645,766	11,589,148
1005.8059	Plant Configuration	Option 1	Process Units - Hotel Load	-	57,066	177,231	247,919	456,657	575,967	599,529	302,321	2,416,689	1,616,989	4,033,678
MA 10 - Subtotal				\$ 3,484,359	\$ 1,560,603	\$ 4,846,812	\$ 6,779,953	\$ 12,486,728	\$ 15,751,237	\$ 16,395,612	\$ 8,267,728	\$ 69,574,718	\$ 44,220,570	\$ 113,795,288
1100.8101	Management / Administration	Option 1	Process Units - Hotel Load	-	45,119	175,698	135,590	113,419	118,261	123,758	65,160	777,005	719,752	1,496,757
1100.8102	NSA Project Controls	Option 1	Process Units - Hotel Load	-	30,940	120,484	92,980	77,776	81,096	84,866	44,683	532,826	493,565	1,026,391
1101.8111	Business Travel	Option 1	Process Units - Hotel Load	-	28,577	111,281	85,878	71,835	74,902	78,384	41,270	492,128	455,866	947,994
1101.8112	Temporary Assignments	Option 1	Process Units - Hotel Load	5,237	5,223	20,338	15,695	13,129	13,689	14,325	7,542	95,178	83,313	178,491
1101.8119	Other ODCs (Legal & S/C Costs)	Option 1	Process Units - Hotel Load	-	44,323	172,596	133,197	111,416	116,173	121,573	64,010	763,288	707,046	1,470,334
1102.8121	Defense of Licensing Basis	Option 1	Process Units - Hotel Load	822,766	194,164	756,088	583,491	488,078	508,915	532,571	280,405	4,166,479	3,097,337	7,263,816
1102.8122	Compliance Program	Option 1	Process Units - Hotel Load	-	102,875	400,603	309,155	258,601	269,642	282,175	148,569	1,771,619	1,641,081	3,412,700

Schedule 7.21

CB&I AREVA MOX Services, LLC.
MFFF Project Costs - Timephased 2007 Baseline by Cost Account and Claim Category⁽¹⁾

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I] = A+B+...H	[J]	[K] = I+J
				Pre- June 2007	June 2007 - September 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	October 2012 - April 2013	Subtotal Through April 2013	ETC	Total
1103.8132	Chemical Safety Support	Option 1	Process Units - Hotel Load	-	29,296	114,082	88,039	73,643	76,787	80,356	42,309	504,513	467,338	971,851
1103.8133	Laboratory Support	Option 1	Process Units - Hotel Load	-	10,027	39,045	30,132	25,204	26,280	27,502	14,480	172,670	159,947	332,617
1104.8141	ES&H Program	Option 1	Process Units - Hotel Load	214,824	143	556	429	359	374	392	206	217,283	2,277	219,560
1104.8142	Radiological Protection	Option 1	Process Units - Hotel Load	5,834	225	876	676	566	590	617	325	9,709	3,589	13,298
1104.8143	Environmental Protection Program	Option 1	Process Units - Hotel Load	167,163	16,455	64,076	49,449	41,363	43,129	45,134	23,763	450,532	262,490	713,022
1104.8144	Industrial Safety Program	Option 1	Process Units - Hotel Load	123,653	7,738	30,132	23,253	19,451	20,281	21,224	11,175	256,907	123,436	380,343
1104.8145	Waste Management Program	Option 1	Process Units - Hotel Load	76,639	(3,834)	(14,928)	(11,520)	(9,637)	(10,048)	(10,515)	(5,536)	10,621	(61,154)	(50,533)
1104.8146	Fitness for Duty Program	Option 1	Process Units - Hotel Load	75,721	(8,808)	(34,298)	(26,469)	(22,141)	(23,086)	(24,159)	(12,720)	(75,999)	(140,504)	(216,463)
1104.8147	Emergency Response Program	Option 1	Process Units - Hotel Load	23,919	1,710	6,660	5,140	4,299	4,483	4,691	2,470	53,373	27,284	80,657
1104.8148	Employee Safety Incentive Program	Option 1	Process Units - Hotel Load	-	2,446	9,525	7,350	6,148	6,709	3,532	42,121	39,018	81,139	120,157
1104.8149	Construction - Safety Engineering Support	Option 1	Process Units - Hotel Load	-	7,042	27,423	21,163	17,703	18,458	19,316	10,170	121,277	112,341	233,618
1105.8151	Criticality Safety Procurement & Const Support	Option 1	Process Units - Hotel Load	-	2,462	9,587	7,399	6,189	6,453	6,753	3,556	42,398	39,274	81,672
1105.8154	Nuclear Radiation Protections	Option 1	Process Units - Hotel Load	-	2,230	8,683	6,701	5,605	5,845	6,116	3,220	38,401	35,572	73,973
1106.8161	Defense of the Safety Basis	Option 1	Process Units - Hotel Load	-	41,237	160,579	123,923	103,659	108,084	113,108	59,553	710,143	657,817	1,367,960
1109.8191	NRC Costs	Option 1	Process Units - Hotel Load	1,756,253	512,722	1,996,577	1,540,806	1,288,852	1,343,876	1,406,342	740,456	10,585,884	8,179,036	18,764,920
1109.8192	Physical Security Program	Option 1	Process Units - Hotel Load	-	2,277,814	8,869,981	6,845,175	5,725,847	5,970,296	6,247,807	3,289,544	39,226,465	36,336,132	75,562,597
1109.8193	Material Control & Accountability Program	Option 1	Process Units - Hotel Load	2,856	406,590	1,583,294	1,221,865	1,022,065	1,065,699	1,115,235	587,184	7,004,790	6,486,009	13,490,799
MA 11 - Subtotal				\$ 3,274,865	\$ 3,756,716	\$ 14,628,938	\$ 11,289,499	\$ 9,443,432	\$ 9,846,592	\$ 10,304,282	\$ 5,425,325	\$ 67,969,649	\$ 59,927,864	\$ 127,897,513
1802.8820	Supplies & Services	Option 1	Process Units - Hotel Load	25,500	15,077	25,910	15,346	26,162	27,149	27,149	201,728	152,488	354,576	607,004
1802.8821	Office Equipment, Furniture Leases & Purchases	Option 1	Process Units - Hotel Load	840,174	95,476	164,076	97,179	119,767	165,667	301,872	171,921	1,956,133	967,908	2,924,041
1802.8830	Temporary Site Features & Services	Option 1	Process Units - Hotel Load	2,887	5,736	9,858	5,839	7,196	9,953	18,137	10,329	69,934	58,152	128,086
1803.8832	Buildings Shops / Trailers	Option 1	Process Units - Hotel Load	4,616,507	514,192	883,637	523,360	645,010	892,209	1,625,747	925,890	10,626,551	5,212,710	15,839,261
1803.8833	Utilities & Services	Option 1	Process Units - Hotel Load	2,580,600	554,553	952,998	564,441	695,640	962,242	1,733,360	998,568	9,062,403	5,621,881	14,684,284
1804.8840	Equipment	Option 1	Process Units - Hotel Load	1,056,977	532,964	915,896	542,466	668,558	924,781	1,685,099	959,692	7,286,433	5,403,013	12,689,446
1804.8842	Construction Materials Management	Option 1	Process Units - Hotel Load	-	9,598	16,494	9,769	12,040	16,654	30,346	17,282	112,182	97,299	209,481
1804.8843	Tools	Option 1	Process Units - Hotel Load	11,106	9,738	16,735	9,912	12,216	16,997	30,790	17,535	124,929	98,722	223,651
1805.8850	Miscellaneous Field Supplies & Services	Option 1	Process Units - Hotel Load	286,460	787,492	1,353,303	801,533	987,843	1,366,431	2,489,857	1,418,015	9,490,934	7,983,343	17,474,277
1805.8851	Foreign National Escorts	Option 1	Process Units - Hotel Load	-	148,479	255,160	151,126	186,254	257,636	469,454	267,362	1,735,471	1,505,231	3,240,702
MA 18 - Subtotal				\$ 9,420,211	\$ 2,673,306	\$ 4,594,065	\$ 2,720,970	\$ 3,353,437	\$ 4,638,632	\$ 8,452,332	\$ 4,813,744	\$ 40,666,997	\$ 27,101,108	\$ 67,768,105
2000.9001	Management / Administration	Option 1	Process Units - Hotel Load	652,416	19,091	110,018	146,030	132,289	184,690	204,684	382,756	1,631,976	616,743	7,999,319
2000.9002	Project Controls	Option 1	Process Units - Hotel Load	78,419	3,224	18,580	24,661	22,341	31,190	34,567	64,639	277,620	1,041,526	1,319,146
2001.9014	Test Equipment & Consumables	Option 1	Process Units - Hotel Load	-	4,580	26,391	35,029	31,733	44,303	49,099	91,814	282,949	1,479,401	1,762,350
2002.9021	Generic Test Documents	Option 1	Process Units - Hotel Load	-	209	1,205	1,599	1,448	2,022	2,241	4,191	12,914	67,523	80,437
2002.9026	Cold Startup Training	Option 1	Process Units - Hotel Load	-	3,505	20,197	26,808	24,286	33,906	37,576	70,267	216,546	1,132,212	1,348,758
MA 20 - Subtotal				\$ 730,835	\$ 30,609	\$ 176,390	\$ 234,127	\$ 212,097	\$ 296,111	\$ 328,167	\$ 613,668	\$ 2,622,004	\$ 9,888,006	\$ 12,510,011
2100.9501	Management / Administration	Option 1	Process Units - Hotel Load	1,115,845	30,735	192,739	119,712	299,344	2,759,573	293,407	590,545	5,401,899	17,137,434	22,539,333
2100.9502	Project Controls	Option 1	Process Units - Hotel Load	50,108	5,605	35,151	21,833	54,593	503,283	53,511	107,702	831,787	3,125,479	3,957,266
2100.9503	Quality Assurance	Option 1	Process Units - Hotel Load	-	-	-	-	-	-	-	-	-	-	-
2100.9506	PS&A	Option 1	Process Units - Hotel Load	-	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
2101.9511	Business Travel	Option 1	Process Units - Hotel Load	9,135	19,124	11,878	29,702	273,814	29,113	58,596	434,411	1,700,431	2,134,842	2,839,274
2101.9512	Temporary Assignments	Option 1	Process Units - Hotel Load	-	4,568	28,643	17,790	44,485	410,097	43,603	10,299	636,945	2,546,772	3,183,717
2101.9518	Software	Option 1	Process Units - Hotel Load	-	5,902	37,013	22,989	57,485	529,944	56,345	113,407	823,087	3,291,045	4,114,132
2102.9522	Training at Richland	Option 1	Process Units - Hotel Load	-	4,108	25,758	15,999	40,005	368,796	39,212	78,922	572,798	2,290,288	2,863,086
2102.9523	Training at LaHague	Option 1	Process Units - Hotel Load	-	69,136	433,545	269,277	673,339	6,207,343	659,985	1,328,362	9,640,987	38,548,696	48,189,683
2102.9524	Training at Melox	Option 1	Process Units - Hotel Load	-	92,954	582,909	362,048	905,317	8,345,885	887,362	1,786,007	12,962,483	51,829,422	64,791,905
2102.9525	Other Training	Option 1	Process Units - Hotel Load	-	95,698	600,114	372,734	932,037	8,592,214	913,552	1,838,721	13,345,070	53,359,166	66,704,236
2102.9526	Operations Activities	Option 1	Process Units - Hotel Load	-	(1,754)	(11,001)	(6,833)	(17,085)	(157,504)	(16,746)	(33,706)	(244,629)	(978,131)	(1,222,760)
2102.9527	Operations Process Simulator	Option 1	Process Units - Hotel Load	-	12,404	77,787	48,314	120,811	1,113,729	118,415	238,336	1,729,798	6,916,455	8,646,253
2102.9528	Reference Plant Training Direct Costs	Option 1	Process Units - Hotel Load	-	(12,404)	(77,787)	(48,314)	(120,811)	(1,113,729)	(118,415)	(238,336)	(1,729,798)	(6,916,455)	(8,646,253)
2103.9531	Organizational Documents	Option 1	Process Units - Hotel Load	120	1,637	10,268	6,378	15,948	147,016	15,631	31,461	228,459	912,996	1,141,455
2103.9532	Laboratory Procedures	Option 1	Process Units - Hotel Load	-	6,101	38,256	23,761	59,416	547,741	58,238	117,216	850,728	3,401,567	4,252,295
2103.9533	Maintenance Procedures	Option 1	Process Units - Hotel Load	-	6,617	41,496	25,774	64,448	594,129	63,170	127,143	922,777	3,689,648	4,612,425
2103.9534	Operating Procedures	Option 1	Process Units - Hotel Load	-	15,442	96,838	60,147	150,399	1,386,491	147,416	296,707	2,153,440	8,610,793	10,763,793
2103.9535	Hot Startup Planning	Option 1	Process Units - Hotel Load	-	535	3,358	2,086	5,215	45,078	5,112	10,299	76,672	298,570	375,242
2103.9536	Turnover to Operations	Option 1	Process Units - Hotel Load	-	652	4,088	2,539	6,548	58,524	6,222	12,524	90,898	363,446	454,344
2103.9537	Support to Other groups	Option 1	Process Units - Hotel Load	-	1,321	8,286	5,146	12,869	118,631	12,613	25,387	184,254	736,722	920,976
2105.9550	Aqueous Polishing Activities	Option 1	Process Units - Hotel Load	-	372	2,336	1,451	3,628	33,444	3,556	7,157	51,944	207,696	259,640
2105.9551	Powder Pellet Activities	Option 1	Process Units - Hotel Load	-	248	1,557	967	2,418	22,295	2,370	4,771	34,628	138,457	173,085
2105.9552	Rod Bundle Activities	Option 1	Process Units - Hotel Load	-	186	1,167	725	1,813	16,711	1,777	3,576	25,954	103,776	129,730
2105.9553	Balance of Plant Activities	Option 1	Process Units - Hotel Load	-	241	1,511	939	2,347	21,640	2,301	4,631	33,610	134,385	167,995
2105.9555	Maintenance Activities	Option 1	Process Units - Hotel Load	-	459	2,879	1,788	4,472	41,226	4,383	8,822	64,030	256,018	320,048
2105.9557	System Engineering Activities	Option 1	Process Units - Hotel Load	-	247	1,550	963	2,407	22,189	2,359	4,748	34,463	137,799	172,262
MA 21 - Subtotal				\$ 1,175,208	\$ 344,061	\$ 2,157,587	\$ 1,340,090	\$ 3,350,950	\$ 30,891,559	\$ 3,284,491	\$ 6,610,749	\$ 49,154,695	\$ 191,842,035	\$ 240,996,730
2201.8141	ES&H Program	Option 1	Process Units - Hotel Load	-	-	-	32,048	86,477	90,342	110,441	66,752	386,060	1,087,628	1,473,688
2201.8143	Environmental Protection Program	Option 1	Process Units - Hotel Load	-	-	-	24,679	66,593	69,570	85,048	51,404	297,295	837,553	1,134,848

Schedule 7.21

CB&I AREVA MOX Services, LLC.													Schedule 7.21	
MFFP Project Costs - Timephased 2007 Baseline by Cost Account and Claim Category ⁽¹⁾														
Cost Account	Cost Account Description	Contract	Claim Category	[A] Pre- June 2007	[B] June 2007 - September 2007	[C] FY 2008	[D] FY 2009	[E] FY 2010	[F] FY 2011	[G] FY 2012	[H] October 2012 - April 2013	[I] = A+B+...H Subtotal Through April 2013	[J] ETC	[K] = I+J Total
2201.8144	Industrial Safety Program	Option 1	Process Units - Hotel Load	-	-	-	21,645	58,404	61,015	74,589	45,083	260,736	734,558	995,294
2201.8145	Waste Management Program	Option 1	Process Units - Hotel Load	-	-	-	20,104	54,247	56,672	69,280	41,874	242,177	682,274	924,451
2201.8146	Fitness for Duty Program	Option 1	Process Units - Hotel Load	-	-	-	39,944	107,784	112,602	137,653	83,199	481,183	1,355,610	1,836,793
2201.8147	Emergency Preparedness Program	Option 1	Process Units - Hotel Load	-	-	-	34,052	91,883	95,990	117,346	70,925	410,195	1,155,622	1,565,817
2201.8148	Employee Safety Incentive Program	Option 1	Process Units - Hotel Load	-	-	-	11,292	30,470	31,832	38,914	23,520	136,027	383,222	519,249
2201.8149	ES & H Safety Engineer	Option 1	Process Units - Hotel Load	-	-	-	38,785	104,654	109,332	133,656	80,783	467,211	1,316,248	1,783,459
2201.8820	Field Office Supplies	Option 1	Process Units - Hotel Load	-	-	-	3,725	10,052	10,501	12,837	7,759	44,873	126,420	171,293
2202.9504	Radiological Protection Early Start Up	Option 1	Process Units - Hotel Load	-	-	-	332,022	895,910	935,958	1,144,186	691,557	3,999,633	11,267,958	15,267,591
MA 22 - Subtotal				\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Process Units - Hotel Load Total				\$ 36,554,031	\$ 13,546,532	\$ 43,054,987	\$ 38,625,917	\$ 46,248,185	\$ 77,483,926	\$ 58,007,872	\$ 37,175,398	\$ 350,696,848	\$ 448,317,576	\$ 799,014,425
1003.8032	Civil / Structural	Option 1	MFFP Construction - Title III Engineering	\$ 813,040	\$ 42,066	\$ 130,645	\$ 182,753	\$ 336,624	\$ 424,573	\$ 441,942	\$ 222,856	\$ 2,594,499	\$ 1,191,961	\$ 3,786,460
1003.8034	Electrical / I&C Site Construction Support	Option 1	MFFP Construction - Title III Engineering	67,969	127,579	396,226	554,260	1,020,927	1,287,662	1,340,339	675,886	5,470,849	3,615,027	9,085,875
1003.8035	Chemical-Construction Support	Option 1	MFFP Construction - Title III Engineering	780,281	53,887	167,359	234,110	431,222	543,887	566,137	285,483	3,062,366	1,526,926	4,589,292
1003.8036	Mechanical - Construction Support	Option 1	MFFP Construction - Title III Engineering	944,044	4,457	13,843	19,365	35,669	44,988	46,829	23,614	1,132,810	126,301	1,259,111
1003.8037	Plant Configuration Site Construction Support	Option 1	MFFP Construction - Title III Engineering	582,757	157,195	488,206	682,926	1,257,924	1,586,579	1,651,485	832,785	7,239,856	4,454,216	11,694,072
1003.8038	Engineering Mechanics - Site Construction Support	Option 1	MFFP Construction - Title III Engineering	103,717	14,103	43,801	61,270	112,858	142,344	148,167	74,715	700,974	399,620	1,100,594
1004.8044	Electrical / I&C Procurement and Fabrication Support	Option 1	MFFP Construction - Title III Engineering	2,589	(2,088)	(6,485)	(9,071)	(16,709)	(21,074)	(21,936)	(11,062)	(85,536)	(59,164)	(145,000)
1004.8046	Chemical-Procurement/Fabrication Support	Option 1	MFFP Construction - Title III Engineering	1,221,379	(23,997)	(74,528)	(104,253)	(192,031)	(242,102)	(252,110)	(127,130)	205,128	(679,966)	(474,839)
1004.8047	Mechanical - Procurement/Fabrication Support	Option 1	MFFP Construction - Title III Engineering	-	4,589	14,251	36,719	46,313	48,208	24,309	194,324	130,021	324,345	
1005.8052	Mechanical - Startup & Operations Support	Option 1	MFFP Construction - Title III Engineering	-	15,424	47,903	67,009	123,428	155,676	162,045	81,713	653,199	437,050	1,090,249
1005.8053	Electrical / IC Startup and Operations Support	Option 1	MFFP Construction - Title III Engineering	-	5,180	16,088	22,504	41,452	52,282	54,420	27,442	219,368	146,777	366,145
1005.8054	Civil/ Structural Startup Operations	Option 1	MFFP Construction - Title III Engineering	-	-	-	-	-	-	-	-	-	-	-
1005.8057	Chemical/Mechanical Engineering Startup Support	Option 1	MFFP Construction - Title III Engineering	-	3,853	11,967	16,740	30,834	38,890	40,481	20,413	163,176	109,180	272,356
MFFP Construction - Title III Engineering Total				\$ 4,515,776	\$ 402,249	\$ 1,249,276	\$ 1,747,548	\$ 3,218,917	\$ 4,059,916	\$ 4,226,005	\$ 2,131,025	\$ 21,550,712	\$ 11,397,949	\$ 32,948,661
1500.8501	Management / Admin	Option 1	Construction Management	\$ 1,350,635	\$ 316,993	\$ 1,066,432	\$ 1,202,559	\$ 1,332,075	\$ 1,434,580	\$ 2,331,046	\$ 1,444,352	\$ 10,478,672	\$ 13,043,523	\$ 23,522,195
1500.8502	Project Controls	Option 1	Construction Management	1,059,965	141,312	475,403	536,088	593,824	639,520	1,039,155	643,876	5,129,142	5,814,658	10,943,800
1500.8503	Quality Assurance	Option 1	Construction Management	483,966	3,798	12,708	14,409	17,189	27,931	17,306	593,338	156,287	749,625	
1500.8504	ES&H	Option 1	Construction Management	234,070	35,539	119,559	134,821	149,341	160,833	261,337	161,929	1,257,428	1,462,330	2,719,758
1500.8506	Business	Option 1	Construction Management	71,333	19,738	66,403	74,880	82,944	89,327	145,147	89,935	639,708	812,180	1,451,888
1501.8511	Business Travel	Option 1	Construction Management	35,822	9,667	32,522	36,673	40,623	43,749	71,087	44,047	314,190	397,774	711,965
1501.8512	Temporary Assignments	Option 1	Construction Management	4,739	220	741	836	926	997	1,004	1,004	11,085	9,068	20,153
1502.8521	Supervision / Admin	Option 1	Construction Management	-	-	-	-	-	-	-	-	-	-	-
1502.8522	Project Controls	Option 1	Construction Management	-	-	-	-	-	-	-	-	-	-	-
1502.8523	Quality Assurance	Option 1	Construction Management	-	-	-	-	-	-	-	-	-	-	-
1502.8524	ES&H	Option 1	Construction Management	-	-	-	-	-	-	-	-	-	-	-
1504.8541	Supervision / Admin	Option 1	Construction Management	877,205	293,949	988,909	1,115,141	1,235,241	1,330,295	2,161,594	1,339,357	9,341,691	12,095,342	21,437,033
1505.8551	Supervision / Admin	Option 1	Construction Management	36,719	(1,124)	(3,783)	(4,265)	(4,725)	(5,088)	(8,268)	(5,123)	4,342	(46,264)	(41,922)
Construction Management Total				\$ 4,154,454	\$ 820,092	\$ 2,758,965	\$ 3,111,141	\$ 3,446,210	\$ 3,711,402	\$ 6,030,649	\$ 3,736,682	\$ 27,769,596	\$ 33,744,998	\$ 61,514,495
1721.2101	Site Preparation	Option 1	MFFP Construction - Installation/Materials	\$ 28,952,492	\$ 910	\$ 4,637	\$ 9,499	\$ 16,643	\$ 21,584	\$ 30,879	\$ 14,526	\$ 29,051,171	\$ 85,145	\$ 29,136,316
1722.2201	Roads & Parking	Option 1	MFFP Construction - Installation/Materials	-	9,170	46,753	95,776	167,801	217,615	311,333	146,455	994,902	858,451	1,853,353
1722.2202	F" Road"	Option 1	MFFP Construction - Installation/Materials	2,736,821	13,819	70,455	144,331	252,871	327,940	469,170	220,703	4,236,110	1,293,660	5,529,770
1723.2301	Yard Structures	Option 1	MFFP Construction - Installation/Materials	-	10,998	56,071	114,865	201,246	260,989	373,386	175,645	1,193,201	1,029,552	2,222,753
1724.2401	Underground Utilities	Option 1	MFFP Construction - Installation/Materials	-	53,483	272,672	558,587	978,654	1,269,183	1,815,768	854,160	5,802,507	5,006,687	10,809,194
1725.2501	Yard Fire Protection	Option 1	MFFP Construction - Installation/Materials	-	11,747	59,889	122,685	214,947	278,758	398,807	187,604	1,274,436	1,099,646	2,374,082
1726.2601	Chillers	Option 1	MFFP Construction - Installation/Materials	-	19,774	100,812	206,519	361,825	469,239	671,321	315,798	2,145,289	1,851,060	3,996,349
1727.2701	Site Security and Perimeter Intrusion Detection and Assessment System	Option 1	MFFP Construction - Installation/Materials	-	167,025	851,537	1,744,427	3,056,257	3,965,570	5,670,517	2,667,481	18,120,824	15,635,534	33,756,358
1728.2801	Yard Electrical & Lighting	Option 1	MFFP Construction - Installation/Materials	-	32,058	163,441	334,819	586,609	790,754	1,086,379	511,987	3,478,048	3,001,031	6,479,079
1729.2901	Landscaping	Option 1	MFFP Construction - Installation/Materials	-	2,168	11,053	22,643	39,671	51,448	73,604	34,624	235,212	202,952	438,164
1731.3150	Administration Building	Option 1	MFFP Construction - Installation/Materials	-	40,368	205,805	421,606	738,660	957,944	1,370,491	644,696	4,379,570	3,778,908	8,158,478
1732.3250	Receiving Warehouse Building	Option 1	MFFP Construction - Installation/Materials	-	11,591	59,093	121,055	212,091	275,053	393,508	185,111	1,257,501	1,085,034	2,342,535
1732.3550		Option 1	MFFP Construction - Installation/Materials	-	0	0	0	0	0	0	0	1	0	1
1733.3550	Secured Warehouse Building	Option 1	MFFP Construction - Installation/Materials	-	18,646	95,061	194,738	341,185	442,472	633,026	297,783	2,022,912	1,745,467	3,768,379
1734.3450	Tech Support & Access Control Building	Option 1	MFFP Construction - Installation/Materials	-	35,278	179,856	368,447	645,525	837,160	1,197,690	563,408	3,827,363	3,302,436	7,129,799
1735.3550	Standby Diesel Generator Building	Option 1	MFFP Construction - Installation/Materials	-	17,683	90,151	184,680	323,563	419,618	600,331	282,403	1,918,430	1,553,315	3,471,745
1736.3652	Civil / Structural / Architectural	Option 1	MFFP Construction - Installation/Materials	-	6,110	31,149	63,810	111,796	144,985	207,423	97,575	662,847	571,936	1,234,783
1736.3653	Mechanical / Piping	Option 1	MFFP Construction - Installation/Materials	-	7,519	38,333	78,528	137,583	178,427	255,268	120,081	815,741	703,861	1,519,602
1736.3654	Electrical	Option 1	MFFP Construction - Installation/Materials	-	11,974	61,045	125,055	219,099	284,143	406,511	191,228	1,299,055	1,120,889	2,419,944
1736.3655	I&C	Option 1	MFFP Construction - Installation/Materials	-	1,914	9,756	19,985	35,014	45,408	64,964	30,560	207,600	179,127	386,727
1736.3656	Emerg/Diesel Gen.System/Equipment	Option 1	MFFP Construction - Installation/Materials	-	38,583	196,707	402,967	706,005	915,595	1,309,904	616,195	4,185,957	3,611,848	7,797,805
1737.3751	Design	Option 1	MFFP Construction - Installation/Materials	-	6,927	35,316	72,348	126,755	164,384	235,177	110,630	793,337	648,463	1,441,800
1737.3752	Civil / Structural / Architectural	Option 1	MFFP Construction - Installation/Materials	-	9,169	46,743	95,757	167,768	217,572	311,272	146,426	994,707	858,282	1,852,989
1737.3753	Mechanical / Piping	Option 1	MFFP Construction - Installation/Materials	-	37,528	191,329	391,950	686,703	890,562	1,274,091	599,348	4,071,511	3,513,100	7,584,611

Schedule 7.21

CB&I AREVA MOX Services, LLC.

MFFF Project Costs - Timephased 2007 Baseline by Cost Account and Claim Category⁽¹⁾

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I] = A+B+...H	[J]	[K] = I+J
				Pre-June 2007	June 2007 - September 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	October 2012 - April 2013	Subtotal Through April 2013	ETC	Total
1737.3754	Electrical	Option 1	MFFF Construction - Installation/Materials	-	17,493	89,184	182,699	320,092	415,117	593,891	279,374	1,897,851	1,637,538	3,535,409
1737.3755	I&C	Option 1	MFFF Construction - Installation/Materials	-	25,947	132,282	270,989	474,777	615,723	880,889	414,381	2,814,988	2,428,910	5,243,898
1737.3756	Reagent Systems Equipment / Piping	Option 1	MFFF Construction - Installation/Materials	-	4,077	20,788	42,585	74,610	96,759	138,429	65,119	442,366	381,695	824,061
1741.4100	Building Structure	Option 1	MFFF Construction - Installation/Materials	5,296,875	182,304	929,431	1,903,999	3,335,839	4,326,138	6,189,228	2,911,490	25,075,303	17,065,797	42,141,101
1741.4110	Architectural Features	Option 1	MFFF Construction - Installation/Materials	-	6,366	32,455	66,485	116,484	151,064	216,121	101,666	690,641	595,918	1,286,559
1741.4120	HVAC	Option 1	MFFF Construction - Installation/Materials	-	25,447	129,738	265,776	465,644	603,878	863,944	406,410	2,760,836	2,382,185	5,143,021
1741.4130	MOX Processing Area (BMP) - MOX Processing Area - Level 1 - Fire Pro	Option 1	MFFF Construction - Installation/Materials	29,410	25,637	130,702	267,752	469,107	608,369	870,368	409,432	2,810,778	2,399,900	5,210,678
1741.4140	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	5,710	22,078	112,561	230,588	403,994	523,926	749,559	352,602	2,401,018	2,066,789	4,467,807
1741.4150	Process Piping	Option 1	MFFF Construction - Installation/Materials	152,294	69,197	352,784	722,700	1,266,184	1,642,071	2,349,244	1,105,114	7,659,588	6,477,661	14,137,249
1741.4170	Other Equipment	Option 1	MFFF Construction - Installation/Materials	-	39,156	199,625	408,945	716,479	929,177	1,329,336	625,336	4,248,054	3,665,429	7,913,483
1741.4180	Electrical	Option 1	MFFF Construction - Installation/Materials	-	62,891	320,637	656,845	1,150,804	1,492,476	2,135,172	1,004,411	6,822,201	5,887,393	12,710,594
1741.4190	Instrumentation	Option 1	MFFF Construction - Installation/Materials	-	64,890	330,824	677,714	1,187,366	1,539,856	2,203,008	1,036,322	7,039,979	6,074,439	13,114,418
1742.4200	Building Structure	Option 1	MFFF Construction - Installation/Materials	-	112,668	574,408	1,176,712	2,061,619	2,673,645	3,825,074	1,799,362	12,223,689	10,547,025	22,770,714
1742.4210	Architectural Features	Option 1	MFFF Construction - Installation/Materials	-	(947)	(4,827)	(9,888)	(17,323)	(22,466)	(32,141)	(15,120)	(102,711)	(88,624)	(191,335)
1742.4220	HVAC	Option 1	MFFF Construction - Installation/Materials	-	37,793	192,678	394,714	691,546	896,843	1,283,077	603,575	4,100,227	3,537,876	7,638,103
1742.4230	MOX Processing Area (BMP) - MOX Processing Area - Level 2 - Fire Pro	Option 1	MFFF Construction - Installation/Materials	-	29,794	151,900	311,177	545,187	707,035	1,011,526	475,834	3,323,453	2,789,119	6,021,572
1742.4240	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	-	6,040	30,794	63,083	110,522	143,333	205,060	96,463	655,294	565,420	1,220,714
1742.4250	Process Piping	Option 1	MFFF Construction - Installation/Materials	-	39,441	201,080	411,925	721,700	935,949	1,339,024	629,893	4,279,013	3,692,143	7,971,156
1742.4270	Other Equipment	Option 1	MFFF Construction - Installation/Materials	-	12,146	61,921	126,849	222,242	288,219	412,343	193,971	1,317,691	1,136,969	2,454,660
1742.4280	Electrical	Option 1	MFFF Construction - Installation/Materials	-	73,788	376,191	770,652	1,350,195	1,751,023	2,505,117	1,178,438	8,005,404	6,907,454	14,912,858
1742.4290	Instrumentation	Option 1	MFFF Construction - Installation/Materials	-	38,137	194,430	398,302	697,832	904,996	1,294,740	609,062	4,137,499	3,570,037	7,707,535
1742.4600	Architectural Features	Option 1	MFFF Construction - Installation/Materials	-	(1)	(4)	(9)	(15)	(20)	(28)	(13)	(90)	(77)	(167)
1743.4310	HVAC	Option 1	MFFF Construction - Installation/Materials	-	1,067	5,442	11,148	19,531	25,329	36,237	17,046	115,800	99,917	215,717
1743.4320	MOX Processing Area (BMP) - MOX Processing Area - Level 3 - Fire Pro	Option 1	MFFF Construction - Installation/Materials	-	78,143	398,395	816,377	1,428,887	1,854,373	2,652,975	1,247,992	8,477,902	7,315,149	15,793,051
1743.4330	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	-	31,709	161,662	331,176	580,236	752,476	1,076,536	506,416	3,440,202	2,968,374	6,408,576
1743.4340	Process Piping	Option 1	MFFF Construction - Installation/Materials	-	8,694	44,326	90,805	159,091	206,320	295,174	138,854	943,265	813,895	1,757,160
1743.4350	Other Equipment	Option 1	MFFF Construction - Installation/Materials	-	70,812	361,019	739,571	1,295,741	1,680,403	2,404,083	1,130,910	7,682,539	6,628,871	14,311,410
1743.4370	Electrical	Option 1	MFFF Construction - Installation/Materials	-	564	2,877	5,894	10,326	13,991	19,158	9,012	61,221	52,824	114,045
1743.4380	Instrumentation	Option 1	MFFF Construction - Installation/Materials	-	72,818	371,244	760,517	1,332,439	1,727,995	2,472,171	1,162,940	7,900,123	6,816,614	14,716,737
1743.4390	Building Structure	Option 1	MFFF Construction - Installation/Materials	-	90,048	459,086	904,466	1,647,713	2,136,864	3,057,123	1,438,109	9,769,407	8,429,523	18,198,930
1744.4400	Architectural Features	Option 1	MFFF Construction - Installation/Materials	-	4,145	21,134	43,294	75,852	98,370	140,733	66,203	449,730	388,050	837,780
1744.4410	HVAC	Option 1	MFFF Construction - Installation/Materials	-	392	1,997	4,090	7,166	9,293	13,296	6,254	42,488	36,660	79,148
1744.4420	MOX Processing Area (BMP) - MOX Processing Area - Level 4 - Fire Pr	Option 1	MFFF Construction - Installation/Materials	-	1,749	8,916	18,266	32,002	41,502	59,375	27,931	189,739	163,717	353,456
1744.4430	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	-	1,237	6,306	12,918	22,633	29,351	41,992	19,754	134,190	115,786	249,976
1744.4440	Electrical	Option 1	MFFF Construction - Installation/Materials	-	2,879	14,678	30,069	52,682	68,321	97,744	45,980	312,333	269,514	581,867
1744.4480	Instrumentation	Option 1	MFFF Construction - Installation/Materials	-	389	1,982	4,060	7,113	9,224	13,197	6,208	42,171	36,388	78,559
1744.4490	Fuel Assembly / Rods	Option 1	MFFF Construction - Installation/Materials	-	(197)	(1,003)	(2,054)	(3,599)	(4,667)	(6,677)	(3,141)	(21,337)	(18,411)	(39,748)
1746.4610	Powder & Pellets	Option 1	MFFF Construction - Installation/Materials	-	24,238	123,574	253,149	443,522	822,899	387,102	2,629,673	2,269,010	4,898,683	10,167,763
1746.4620	Furnaces & Pellet Storage	Option 1	MFFF Construction - Installation/Materials	-	90,256	460,148	942,643	1,651,327	2,141,811	3,064,201	1,441,438	9,792,024	8,449,038	18,241,062
1746.4630	PuO2 Receiving, Storage & Decanning	Option 1	MFFF Construction - Installation/Materials	-	19,742	100,650	206,187	361,243	468,484	670,241	315,290	2,141,837	1,848,081	3,989,918
1746.4640	Labs & Testing	Option 1	MFFF Construction - Installation/Materials	-	16,996	86,650	177,507	310,996	403,320	577,013	271,434	1,843,916	1,591,022	3,434,938
1751.5100	Building Structure	Option 1	MFFF Construction - Installation/Materials	-	179,170	913,454	1,871,270	3,278,497	4,251,773	6,082,837	2,861,442	19,438,443	16,772,442	36,210,885
1751.5110	Architectural Features	Option 1	MFFF Construction - Installation/Materials	-	74,533	379,986	778,426	1,363,816	1,768,687	2,530,388	1,190,326	11,053,644	6,977,135	18,030,779
1751.5120	HVAC	Option 1	MFFF Construction - Installation/Materials	-	1,016	5,178	10,608	18,585	24,103	34,483	16,221	110,194	95,081	205,275
1751.5130	Aqueous Polishing Process Area (BAP) - AP Process Area - Level 1 -	Option 1	MFFF Construction - Installation/Materials	-	11,327	57,746	118,296	207,257	268,785	384,539	180,892	1,228,841	1,060,304	2,289,145
1751.5140	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	-	6,173	31,470	64,469	112,950	146,481	209,565	98,582	669,689	577,841	1,247,530
1751.5150	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	-	16,217	82,677	169,370	296,739	384,831	550,562	258,991	1,759,387	1,518,085	3,277,473
1751.5170	Other Equipment	Option 1	MFFF Construction - Installation/Materials	192,088	101,296	516,433	1,057,947	1,853,541	2,403,796	3,439,012	1,617,754	11,181,867	9,482,520	20,664,387
1751.5180	Electrical	Option 1	MFFF Construction - Installation/Materials	-	4,940	25,186	51,594	90,394	117,229	167,715	78,895	535,955	462,448	998,403
1751.5190	Instrumentation	Option 1	MFFF Construction - Installation/Materials	-	10,882	55,479	113,652	199,120	258,232	369,442	173,790	1,180,596	1,018,677	2,199,273
1752.5200	Building Structure	Option 1	MFFF Construction - Installation/Materials	-	14,281	72,810	149,156	261,324	338,902	484,853	228,081	1,549,407	1,336,904	2,886,311
1752.5210	Architectural Features	Option 1	MFFF Construction - Installation/Materials	-	26,356	134,368	275,262	482,263	625,431	894,779	420,915	2,859,375	2,467,208	5,326,583
1752.5220	HVAC	Option 1	MFFF Construction - Installation/Materials	-	(58)	(294)	(603)	(1,059)	(1,369)	(2,021)	(921)	(5,401)	(4,601)	(11,002)
1752.5230	Aqueous Polishing Process Area (BAP) - AP Process Area - Level 2 -	Option 1	MFFF Construction - Installation/Materials	-	15,223	77,611	158,992	278,557	361,251	516,827	243,122	1,651,583	1,425,067	3,076,650
1752.5240	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	-	3,821	19,479	39,904	69,912	90,666	129,712	61,018	414,511	357,661	772,172
1752.5250	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	-	3,954	20,158	41,294	72,348	93,826	134,233	63,145	428,957	370,126	799,083
1752.5270	Other Equipment	Option 1	MFFF Construction - Installation/Materials	139,213	109,776	559,666	1,146,512	2,008,708	2,605,027	3,726,905	1,753,182	12,048,988	10,276,338	22,325,326
1752.5280	Electrical	Option 1	MFFF Construction - Installation/Materials	-	8,607	43,880	89,892	157,492	204,246	292,206	137,457	933,780	805,711	1,739,491
1752.5290	Instrumentation	Option 1	MFFF Construction - Installation/Materials	-	21,151	107,834	220,905	387,030	501,926	718,085	337,796	2,294,727	1,980,002	4,274,729
1753.5300	Building Structure	Option 1	MFFF Construction - Installation/Materials	-	17,107	87,217	178,670	313,033	405,962	580,792	273,212	1,855,993	1,601,441	3,457,434
1753.5310	Architectural Features	Option 1	MFFF Construction - Installation/Materials	-	34,849	177,668	363,963	637,670	826,973	1,183,116	556,553	3,780,792	3,262,252	7,043,044
1753.5320	HVAC	Option 1	MFFF Construction - Installation/Materials	-	(39)	(199)	(407)	(714)	(925)	(1,324)	(623)	(4,321)	(3,651)	(7,972)
1753.5330	Aqueous Polishing Process Area (BAP) - AP Process Area - Level 3 -	Option 1	MFFF Construction - Installation/Materials	-	14,066	71,712	146,906	257,381	333,789	477,539	224,640	1,526,032	1,316,735	2,842,768
1753.5340	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	-	3,974	20,260	41,503	72,714	94,301	134,912	63,464	431,129	371,999	803,128
1753.5340	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	-	2,824	14,396	29,492	51,671	67,010	95,868	45,098	306,358	264,341	570,699

Schedule 7.21

CB&I AREVA MOX Services, LLC.

MFFF Project Costs - Timephased 2007 Baseline by Cost Account and Claim Category⁽¹⁾

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I] = A+B+...H	[J]	[K] = I+J
				Pre-June 2007	June 2007 - September 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	October 2012 - April 2013	Subtotal Through April 2013	ETC	Total
1753.5350	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	71,066	60,563	308,765	632,525	1,108,195	1,437,181	2,056,116	967,222	6,641,633	5,669,407	12,311,041
1753.5370	Other Equipment	Option 1	MFFF Construction - Installation/Materials	-	30	155	317	556	721	1,031	485	3,296	2,844	6,140
1753.5380	Electrical	Option 1	MFFF Construction - Installation/Materials	-	40,021	204,039	417,986	732,319	949,720	1,358,726	639,162	4,341,974	3,746,467	8,088,441
1753.5390	Instrumentation	Option 1	MFFF Construction - Installation/Materials	-	20,413	104,069	213,192	373,516	484,400	693,012	326,001	2,214,603	1,910,868	4,125,471
1754.5410	Architectural Features	Option 1	MFFF Construction - Installation/Materials	-	137	700	1,433	2,511	3,256	4,659	2,191	14,887	12,845	27,732
1754.5420	HVAC	Option 1	MFFF Construction - Installation/Materials	-	14,325	73,032	149,611	262,121	339,936	486,333	228,777	1,554,135	1,340,984	2,895,119
1754.5430	Aqueous Polishing Process Area (BAP) - AP Process Area - Level 4 -	Option 1	MFFF Construction - Installation/Materials	-	4,884	24,900	51,009	89,368	115,899	165,812	78,000	529,871	457,199	987,070
1754.5440	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	-	7,467	38,068	77,984	136,629	177,190	253,499	119,249	810,086	698,981	1,509,067
1754.5450	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	-	50,814	259,064	530,709	929,811	1,205,841	1,725,147	811,531	5,512,918	4,756,815	10,269,733
1754.5470	Other Equipment	Option 1	MFFF Construction - Installation/Materials	-	2,896	14,764	30,244	52,988	68,719	98,313	46,248	314,170	271,882	585,252
1754.5480	Electrical	Option 1	MFFF Construction - Installation/Materials	-	23,418	119,393	244,584	428,516	555,728	795,057	374,005	2,540,700	2,192,241	4,732,941
1754.5490	Instrumentation	Option 1	MFFF Construction - Installation/Materials	-	36,037	183,726	376,375	659,415	855,173	1,223,461	575,531	3,909,718	3,373,496	7,283,214
1754.5540		Option 1	MFFF Construction - Installation/Materials	-	11	56	115	202	262	375	176	1,198	1,033	2,231
1755.5510	Architectural Features	Option 1	MFFF Construction - Installation/Materials	-	647	3,297	6,754	11,834	15,347	21,956	10,328	70,162	60,540	130,702
1755.5520	HVAC	Option 1	MFFF Construction - Installation/Materials	-	16,003	81,586	167,133	292,820	379,749	543,291	255,571	1,736,153	1,498,038	3,234,191
1755.5530	Aqueous Polishing Process Area (BAP) - AP Process Area - Level 5 -	Option 1	MFFF Construction - Installation/Materials	-	8,182	41,716	85,458	149,723	194,171	277,792	130,677	887,719	765,967	1,653,686
1755.5540	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	-	11,061	56,394	115,527	202,406	262,493	375,538	176,658	1,200,078	1,035,487	2,235,565
1755.5550	Process Piping & Equipment	Option 1	MFFF Construction - Installation/Materials	-	60,867	310,318	635,705	1,113,767	1,444,407	2,066,453	972,085	6,603,602	5,697,912	12,301,514
1755.5570	Other Equipment	Option 1	MFFF Construction - Installation/Materials	-	1,748	8,913	18,259	31,990	41,487	59,354	27,921	189,673	163,659	353,332
1755.5580	Electrical	Option 1	MFFF Construction - Installation/Materials	-	18,324	93,422	191,380	335,301	434,841	622,110	292,648	1,988,026	1,715,367	3,703,393
1755.5590	Instrumentation	Option 1	MFFF Construction - Installation/Materials	-	65,910	336,028	688,375	1,206,044	1,564,078	2,237,663	1,052,624	7,150,722	6,169,994	13,320,716
1756.5600	Building Structure	Option 1	MFFF Construction - Installation/Materials	-	30,506	155,526	318,604	558,200	723,911	1,035,669	487,192	3,309,607	2,855,691	6,165,298
1756.5670	Other Equipment	Option 1	MFFF Construction - Installation/Materials	-	18,946	96,592	197,875	364,681	449,599	643,223	302,580	2,055,497	1,773,583	3,829,080
1758.5810	Mechanical Systems	Option 1	MFFF Construction - Installation/Materials	-	62,052	316,256	648,016	1,135,441	1,472,515	2,106,667	991,002	6,732,109	5,808,793	12,540,902
1758.5850	Chemical Systems	Option 1	MFFF Construction - Installation/Materials	-	12,066	61,515	126,017	206,637	286,328	392,699	192,699	1,309,366	1,129,509	2,438,555
1761.6100	Building Structure	Option 1	MFFF Construction - Installation/Materials	1,422,400	83,161	423,975	868,540	1,521,697	1,973,438	2,823,316	1,328,123	10,444,648	7,784,838	18,229,486
1761.6110	Architectural Features	Option 1	MFFF Construction - Installation/Materials	653,289	6,804	34,686	71,057	124,493	161,450	230,980	108,656	1,391,414	636,891	2,028,305
1761.6120	HVAC	Option 1	MFFF Construction - Installation/Materials	-	7,103	36,212	74,183	129,970	168,554	241,143	113,437	770,603	664,914	1,435,517
1761.6130	Shipping and Receiving Area (BSR) - Shipping and Receiving Area - Le	Option 1	MFFF Construction - Installation/Materials	-	7,946	40,509	82,986	145,393	188,556	269,759	126,898	862,407	743,816	1,605,863
1761.6140	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	-	6,961	35,491	72,706	127,382	165,198	236,342	111,178	755,258	651,674	1,406,932
1761.6150	Process Piping	Option 1	MFFF Construction - Installation/Materials	-	1,636	8,343	17,092	29,945	38,835	55,559	26,136	177,546	153,195	330,741
1761.6170	Other Equipment	Option 1	MFFF Construction - Installation/Materials	-	1,281	6,530	13,377	23,436	30,394	43,483	20,455	138,954	119,897	258,851
1761.6180	Electrical	Option 1	MFFF Construction - Installation/Materials	-	48,081	245,129	502,163	879,798	1,140,980	1,632,354	767,879	5,216,384	4,500,951	9,717,335
1761.6190	Instrumentation	Option 1	MFFF Construction - Installation/Materials	-	2,316	11,808	24,190	42,381	54,962	78,632	36,989	251,278	216,815	468,092
1762.6200	Building Structure	Option 1	MFFF Construction - Installation/Materials	-	29,701	151,425	310,203	543,481	704,823	1,008,361	474,346	3,222,341	2,780,393	6,002,734
1762.6210	Architectural Features	Option 1	MFFF Construction - Installation/Materials	-	176	896	1,836	3,217	4,172	5,969	2,808	19,075	16,459	35,534
1762.6220	HVAC	Option 1	MFFF Construction - Installation/Materials	-	14,022	71,487	146,445	256,575	332,743	476,042	223,936	1,521,251	1,312,610	2,833,861
1762.6230	Shipping and Receiving Area (BSR) - Shipping and Receiving Area - Le	Option 1	MFFF Construction - Installation/Materials	-	6,206	31,642	64,820	113,565	147,279	210,706	99,119	673,336	580,988	1,254,324
1762.6240	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	-	530	2,704	5,540	9,706	12,587	18,008	8,471	57,547	49,654	107,201
1762.6250	Process Piping	Option 1	MFFF Construction - Installation/Materials	-	921	4,698	9,624	16,862	21,868	31,285	14,717	99,975	86,263	186,238
1762.6280	Electrical	Option 1	MFFF Construction - Installation/Materials	-	12,043	61,399	125,780	220,369	285,790	408,867	192,336	1,306,585	1,127,386	2,433,971
1762.6290	Instrumentation	Option 1	MFFF Construction - Installation/Materials	-	596	3,037	6,221	10,899	14,135	20,222	9,513	64,622	55,759	120,382
1763.6310	Architectural Features	Option 1	MFFF Construction - Installation/Materials	-	2,362	12,043	24,671	43,223	56,055	80,196	37,725	256,275	221,127	477,402
1763.6320	HVAC	Option 1	MFFF Construction - Installation/Materials	-	12,683	64,662	132,464	232,080	300,976	430,594	202,557	1,376,016	1,187,294	2,563,310
1763.6330	Shipping and Receiving Area (BSR) - Shipping and Receiving Area - Le	Option 1	MFFF Construction - Installation/Materials	-	8,688	44,293	90,738	158,975	206,169	294,957	138,752	942,572	813,297	1,755,869
1763.6340	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	-	723	3,688	7,556	13,238	17,168	24,562	11,554	78,490	67,725	146,215
1763.6350	Process Piping	Option 1	MFFF Construction - Installation/Materials	-	223	1,137	2,329	4,081	5,292	7,571	3,562	24,194	20,876	45,070
1763.6370	Other Equipment	Option 1	MFFF Construction - Installation/Materials	-	36	185	379	664	861	1,232	579	3,935	3,396	7,331
1763.6380	Electrical	Option 1	MFFF Construction - Installation/Materials	-	5,343	27,238	55,800	97,762	126,784	181,385	85,326	579,638	500,140	1,079,778
1763.6390	Instrumentation	Option 1	MFFF Construction - Installation/Materials	-	7,874	40,143	82,236	144,078	186,850	267,319	125,750	854,251	737,090	1,591,341
1764.6470	Other Equipment	Option 1	MFFF Construction - Installation/Materials	-	33	167	341	598	775	1,109	522	3,544	3,058	6,602
1771.7100	Building Structure	Option 1	MFFF Construction - Installation/Materials	-	36,795	187,588	384,266	676,276	873,150	1,249,179	587,629	3,994,904	3,444,411	7,439,315
1771.7110	Architectural Features	Option 1	MFFF Construction - Installation/Materials	229,577	34,224	174,481	357,435	626,233	812,140	1,161,896	546,570	3,942,555	3,303,740	7,146,295
1771.7120	HVAC	Option 1	MFFF Construction - Installation/Materials	-	4,587	23,385	47,905	83,930	108,846	155,722	73,253	497,628	429,378	927,006
1771.7130	Fire Protection	Option 1	MFFF Construction - Installation/Materials	-	15	75	154	271	351	502	236	1,604	1,384	2,988
1771.7140	Utility Equipment & Piping	Option 1	MFFF Construction - Installation/Materials	-	40	203	406	729	946	1,353	637	4,324	3,731	8,055
1771.7170	Other Equipment	Option 1	MFFF Construction - Installation/Materials	-	2	8	17	30	39	55	26	176	152	328
1771.7180	Electrical	Option 1	MFFF Construction - Installation/Materials	-	15,492	78,984	161,804	283,483	367,640	525,967	247,422	1,680,793	1,450,270	3,131,063
1771.7190	Instrumentation	Option 1	MFFF Construction - Installation/Materials	-	1,147	5,849	11,982	20,993	27,225	38,950	18,322	124,468	107,397	231,865
1772.7200	Building Structure	Option 1	MFFF Construction - Installation/Materials	-	127,780	651,454	1,334,545	2,338,146	3,032,264	4,338,135	2,040,713	13,863,037	11,961,708	25,824,745
1772.7210	Architectural Features	Option 1	MFFF Construction - Installation/Materials	-	5,286	26,951	55,211	96,731	125,447	179,471	84,425	573,522	494,863	1,068,385
1772.7270	Other Equipment	Option 1	MFFF Construction - Installation/Materials	-	1,358	6,923	14,182	24,848	32,224	46,101	21,687	147,323	127,117	274,440
1772.7280	Electrical	Option 1	MFFF Construction - Installation/Materials	-	5,143	26,221	53,715	94,110	122,048	174,609	82,138	557,983	481,455	1,039,438
1774.7401	Subcontractor Project Management/Project Controls	Option 1	MFFF Construction - Installation/Materials	74,000	32,282	164,582	337,156	590,704	766,064	1,095,977	515,561	3,576,327	3,021,979	6,598,306
1774.7406	Subcontractor Mobilization	Option 1	MFFF Construction - Installation/Materials	-	2,164	11,031	22,598	39,593	51,346	73,459	34,556	234,748	202,552	437,300

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CB&I AREVA MOX Services, LLC.

MFFF Project Costs - Timephased 2007 Baseline by Cost Account and Claim Category⁽¹⁾

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I] = A+B+...+H	[J]	[K] = I+J
				Pre-June 2007	June 2007 - September 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	October 2012 - April 2013	Subtotal Through April 2013	ETC	Total
1774.7407	Subcontractor Demobilization	Option 1	MFFF Construction - Installation/Materials	-	133	676	1,385	2,426	3,147	4,502	2,118	14,387	12,413	26,800
1774.7408	Dewatering, Erosion and Sedimentation Control	Option 1	MFFF Construction - Installation/Materials	-	873	4,452	9,119	15,977	20,721	29,644	13,945	94,731	81,739	176,470
1774.7409	Equipment Rental (Including Vehicles)	Option 1	MFFF Construction - Installation/Materials	-	11,657	59,433	121,752	213,311	276,636	395,772	186,176	1,264,736	1,091,277	2,356,013
1774.7410	Miscellaneous Procured Services	Option 1	MFFF Construction - Installation/Materials	-	1,116	5,691	11,658	20,426	26,489	37,897	17,827	121,105	104,495	225,600
1774.7411	Consumables and Expendable Materials	Option 1	MFFF Construction - Installation/Materials	469	3,834	19,545	40,039	70,149	90,974	130,153	61,226	416,390	358,877	775,267
1774.7412	Performance Bond	Option 1	MFFF Construction - Installation/Materials	434,539	2,162	11,021	22,578	39,557	51,301	73,394	34,525	669,077	202,371	871,448
1774.7413	Tools	Option 1	MFFF Construction - Installation/Materials	29,080	829	4,227	8,659	15,170	19,674	28,146	13,240	119,025	77,608	196,633
1774.7414	Craft Distributable and Indirect Costs	Option 1	MFFF Construction - Installation/Materials	4,544	18,616	94,909	194,427	340,639	441,763	632,012	297,306	2,024,215	1,742,672	3,766,887
1774.7415	Concrete Batch Plant	Option 1	MFFF Construction - Installation/Materials	757,087	14,948	76,211	156,122	273,529	354,731	507,499	238,734	2,378,861	1,399,346	3,778,207
1774.7416	Independent Test Lab	Option 1	MFFF Construction - Installation/Materials	-	5,042	25,705	52,658	92,259	119,647	171,174	80,522	547,007	471,985	1,018,992
1774.7417	NDE Testing	Option 1	MFFF Construction - Installation/Materials	-	4,329	22,069	45,210	79,209	102,723	146,962	69,133	469,634	405,224	874,858
1774.7418	Craft Support for MFFF Construction	Option 1	MFFF Construction - Installation/Materials	-	7,150	36,453	74,677	130,836	169,677	242,749	114,192	775,735	669,342	1,445,077
1774.7419	Construction Distributables - Misc	Option 1	MFFF Construction - Installation/Materials	-	44,521	226,981	464,985	814,662	1,056,508	1,511,502	711,029	4,830,188	4,167,723	8,997,911
1774.7420	Bulk Cable for MFFF Construction	Option 1	MFFF Construction - Installation/Materials	-	50,090	255,374	523,150	916,569	1,188,667	1,700,577	799,973	5,434,400	4,689,067	10,123,467
1774.7424	Distributables - Bulk Commodity - HVAC	Option 1	MFFF Construction - Installation/Materials	-	83,346	424,921	870,477	1,525,091	1,977,840	2,829,614	1,331,085	9,042,374	7,802,204	16,844,578
1774.7428	Suspense Account - Civil, Structural Commodities	Option 1	MFFF Construction - Installation/Materials	-	63,259	322,513	660,689	1,157,538	1,501,173	2,147,666	1,010,289	6,863,128	5,921,843	12,784,971
1774.7430	Distributables - Bulk Commodity - Stainless Steel Ball Valves	Option 1	MFFF Construction - Installation/Materials	-	87,379	445,482	912,598	1,598,888	2,073,544	2,966,534	1,395,494	9,479,919	8,197,738	17,659,657
1774.7430	Distributable - Bulk Commodity Account - Chillers	Option 1	MFFF Construction - Installation/Materials	-	12,018	61,269	125,513	219,901	285,182	407,998	191,927	1,303,808	1,124,990	2,428,798
1774.7432	Suspense Account - Electrical (General)	Option 1	MFFF Construction - Installation/Materials	-	74,790	381,300	781,117	1,368,530	1,774,801	2,539,135	1,194,440	8,114,112	7,001,254	15,115,366
1774.7433	Suspense Account - Instrumentation & Controls	Option 1	MFFF Construction - Installation/Materials	-	482,296	2,458,867	5,037,147	8,825,169	11,445,067	16,373,987	7,702,526	52,325,060	45,148,626	97,473,686
1774.7438	Distributables - HVAC Equipment	Option 1	MFFF Construction - Installation/Materials	-	34,867	177,760	364,152	638,000	827,401	1,183,729	556,841	3,782,750	3,263,942	7,046,692
1774.7438	Suspense Account - Mechanical Equipment	Option 1	MFFF Construction - Installation/Materials	-	271,159	1,382,437	2,832,010	4,961,732	6,434,704	9,205,867	4,330,554	29,418,463	25,383,962	54,802,155
1774.7439	Consumable & Expendable Materials Specific to CP-27 - BAP Chemical P	Option 1	MFFF Construction - Installation/Materials	-	7,840	39,970	81,881	143,456	186,044	266,165	125,207	850,562	733,907	1,584,469
MFFF Construction - Installation/Materials Total				\$ 44,148,438	\$ 5,039,255	\$ 25,691,424	\$ 52,630,521	\$ 92,209,597	\$ 119,583,546	\$ 171,083,262	\$ 80,479,685	\$ 590,865,728	\$ 471,734,467	\$ 1,062,600,195
1901.6020	QA Program Management & Administration	Option 1	Quality Assurance	\$ -	\$ -	\$ -	\$ 234,173	\$ 316,762	\$ 345,299	\$ 426,535	\$ 207,721	\$ 1,630,480	\$ 1,681,328	\$ 3,211,818
1901.6021	Quality Engineering	Option 1	Quality Assurance	-	-	-	96,937	469,297	511,575	631,930	307,747	2,267,486	2,490,958	4,758,444
1901.6022	Audit & Surveillance	Option 1	Quality Assurance	-	-	-	346,111	130,008	141,720	175,061	85,254	620,163	690,061	1,318,214
1901.6023	Quality Control Projects	Option 1	Quality Assurance	-	-	-	339,181	458,805	500,138	617,803	300,867	2,216,794	2,435,270	4,652,064
1901.6024	QA & QC Assembly GS	Option 1	Quality Assurance	-	-	-	125,166	169,310	184,563	227,985	111,027	818,052	898,625	1,716,727
1901.6026	QA/QC Subcontractors	Option 1	Quality Assurance	-	-	-	21,873	29,587	32,253	39,841	19,402	142,956	157,044	300,000
1901.6027	Testing & Inspection QA/QC	Option 1	Quality Assurance	-	-	-	275,361	372,477	406,033	501,558	244,256	1,799,685	1,977,053	3,776,738
1901.6029	Regulatory Compliance	Option 1	Quality Assurance	-	-	-	52,532	71,060	77,461	95,685	46,598	343,337	377,174	720,511
1901.9003	Quality Engineering	Option 1	Quality Assurance	-	-	-	98,651	133,443	145,465	179,687	87,507	644,753	708,296	1,353,049
1902.9503	Quality Engineering	Option 1	Quality Assurance	-	-	-	88,621	119,876	130,676	161,419	78,610	579,203	636,286	1,215,489
Quality Assurance Total				\$ -	\$ -	\$ -	\$ 1,678,607	\$ 2,270,625	\$ 2,475,183	\$ 3,057,505	\$ 1,488,989	\$ 10,970,909	\$ 12,052,145	\$ 23,023,054
1000.8006	Engineering Training	Option 1	All Other	\$ 763,100	\$ (34,318)	\$ (106,582)	\$ (149,092)	\$ (274,622)	\$ (346,371)	\$ (360,541)	\$ (181,808)	\$ (690,233)	\$ (972,415)	\$ (1,662,648)
1001.8011	Business Travel	Option 1	All Other	164,332	11,609	36,055	50,436	92,901	117,173	121,966	61,503	655,974	328,954	984,928
1001.8012	Temporary Assignments	Option 1	All Other	-	-	-	-	-	-	-	-	-	-	-
1001.8019	Other ODCs	Option 1	All Other	38,014	31,926	99,153	138,700	255,481	322,229	335,412	169,136	1,390,051	904,438	2,294,689
1002.8022	Chemical	Option 1	All Other	184,146	7,263	22,557	31,554	58,120	73,305	76,304	38,478	491,727	205,800	697,527
1002.8023	Mechanical	Option 1	All Other	43,318	12,113	37,618	52,622	96,928	122,252	127,253	64,169	556,273	343,215	899,488
1002.8024	Laboratory	Option 1	All Other	12,396	2,906	9,026	12,626	23,257	29,333	30,533	15,397	135,474	82,350	217,824
1002.8026	Safety	Option 1	All Other	37,581	3,706	11,511	16,102	29,660	37,409	38,940	19,636	194,546	105,024	299,570
1002.8027	Reference Plant Support	Option 1	All Other	12,412	3,069	9,531	13,333	24,559	30,975	32,242	16,259	142,379	86,960	229,339
1003.8031	Supervision / Admin	Option 1	All Other	576,306	(20,213)	(62,777)	(87,816)	(161,753)	(204,014)	(212,361)	(107,086)	(279,715)	(572,757)	(852,472)
1004.8048	Plant Configuration - Construction, Procurement & Fabrication Support	Option 1	All Other	-	33,078	102,730	143,704	264,697	333,854	347,511	175,238	1,400,811	937,272	2,338,083
1004.8049	Equipment Qualification	Option 1	All Other	388,084	(7,295)	(22,656)	(31,692)	(58,375)	(73,627)	(76,639)	(38,646)	79,155	(206,702)	(127,547)
1005.8051	Supervision / Admin	Option 1	All Other	100,516	4,736	14,710	20,577	37,902	47,805	49,760	25,092	301,098	134,208	435,306
1100.8101	Management / Administration	Option 1	All Other	130,404	(2,216)	(8,629)	(6,659)	(5,570)	(5,808)	(6,078)	(3,200)	92,244	(35,349)	56,895
1100.8102	NSA Project Controls	Option 1	All Other	63,145	514	2,000	1,544	1,291	1,346	1,409	74,192	71,990	8,194	80,184
1101.8111	Business Travel	Option 1	All Other	35,366	9,828	38,272	29,536	24,706	25,761	26,958	14,194	204,620	156,784	361,404
1101.8119	Other ODCs (Legal & S/C Costs)	Option 1	All Other	176,771	56,786	221,127	176,649	142,745	148,639	155,757	82,008	1,045,681	905,536	2,060,536
1102.8122	Compliance Program	Option 1	All Other	426,254	993	3,865	2,983	2,462	2,433	2,433	443,347	443,347	15,834	459,181
1103.8132	Chemical Safety Support	Option 1	All Other	266,728	88,921	346,265	267,221	223,525	233,068	243,901	128,417	1,798,046	1,418,486	3,216,532
1103.8133	Laboratory Support	Option 1	All Other	8,707	51,353	199,973	154,324	129,089	134,600	140,856	74,162	893,064	819,194	1,712,258
1104.8151	Criticality Safety Procurement & Cons	Option 1	All Other	-	-	-	-	-	-	-	-	-	-	-
1105.8151	Criticality Safety Procurement & Const Support	Option 1	All Other	920,525	40,077	156,064	120,438	100,744	105,045	109,928	57,878	1,610,698	639,319	2,250,017
1105.8152	Criticality Safety Startup Support	Option 1	All Other	1,054	77,458	301,628	232,773	194,710	203,023	212,460	111,862	1,334,967	1,235,627	2,570,594
1105.8153	Criticality Safety Licensing Support	Option 1	All Other	92,130	86,795	337,985	260,831	218,180	227,495	238,069	125,346	1,586,831	1,384,567	2,971,399
1105.8154	Nuclear Radiation Protections	Option 1	All Other	130,096	88,678	345,320	266,491	222,915	232,431	243,235	128,066	1,657,233	1,414,612	3,071,845
1105.8155	Nuclear Radiation & Criticality Monitoring	Option 1	All Other	33,799	25,709	100,113	77,260	64,626	67,385	70,517	37,128	476,538	410,116	886,654
1105.8156	Emerg. Planning & Deactivation Design Spt.	Option 1	All Other	3,395	6,922	26,953	20,801	17,399	18,142	18,985	9,996	122,593	110,415	233,008
1106.8116	Integrated Safety Analysis	Option 1	All Other	-	-	-	-	-	-	-	-	-	-	-

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CB&I AREVA MOX Services, LLC.
MFFF Project Costs - Timephased 2007 Baseline by Cost Account and Claim Category⁽¹⁾

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I] = A+B+...H	[J]	[K] = I+J
				Pre-June 2007	June 2007 - September 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	October 2012 - April 2013	Subtotal Through April 2013	ETC	Total
1106.8161	Defense of the Safety Basis	Option 1	All Other	611,711	81,413	317,027	244,657	204,651	213,388	223,307	117,574	2,013,727	1,298,711	3,312,438
1106.8162	ISA Review of Design/Construction Modification	Option 1	All Other	330,635	74,246	289,121	223,122	186,637	194,605	203,650	107,224	1,609,240	1,184,393	2,793,633
1106.8164	Update the Safety Basis	Option 1	All Other	90,459	139,926	544,882	420,498	351,738	366,754	383,802	202,076	2,500,135	2,232,123	4,732,258
1106.8165	Support Update of the ISA Summary	Option 1	All Other	130,945	49,681	193,463	149,300	124,886	130,218	136,271	71,748	986,511	792,525	1,779,036
1109.8192	Physical Security Program	Option 1	All Other	501,270	99,250	386,485	298,260	249,488	260,139	272,231	143,333	2,210,455	1,583,248	3,793,703
1109.8193	Material Control & Accountability Program	Option 1	All Other	304,892	72,530	282,436	217,963	182,321	190,105	198,941	104,745	1,553,932	1,157,007	2,710,939
1109.8195	DOE/WSRC Costs	Option 1	All Other	-	-	-	-	-	-	-	-	-	-	-
2000.9001	Management / Administration	Option 1	All Other	-	8,056	46,426	61,622	55,824	77,936	86,373	161,517	497,753	2,602,512	3,100,265
2000.9002	Project Controls	Option 1	All Other	-	3,786	21,818	28,960	26,235	36,627	40,592	75,906	233,922	1,223,065	1,456,987
2000.9003	Quality Assurance	Option 1	All Other	-	-	-	-	-	-	-	-	-	-	-
2001.9011	Business Travel	Option 1	All Other	32,660	7,070	40,744	54,080	48,992	68,398	75,802	141,749	469,495	2,284,002	2,753,497
2001.9012	Temporary Assignments	Option 1	All Other	-	5,488	31,624	41,975	38,026	53,088	58,836	110,022	339,059	1,772,773	2,111,832
2001.9014	Test Equipment & Consumables	Option 1	All Other	-	34,170	196,911	261,365	236,773	330,560	366,346	685,061	2,111,186	11,038,366	13,149,552
2001.9017	Spare Parts	Option 1	All Other	-	10,293	59,318	78,734	71,326	99,578	110,358	206,368	635,975	3,325,206	3,961,181
2002.9021	Generic Test Documents	Option 1	All Other	88,489	4,376	25,220	33,476	30,326	42,338	46,922	87,743	358,890	1,413,799	1,772,689
2002.9022	Validation Plans	Option 1	All Other	-	21,888	126,133	167,420	151,667	211,744	234,666	438,822	1,352,340	7,070,728	8,423,068
2002.9023	General Test Programs	Option 1	All Other	-	4,586	26,428	35,078	31,778	44,365	49,168	91,944	283,347	1,481,485	1,764,832
2002.9024	Technical Support	Option 1	All Other	6,322	8,345	48,089	63,830	57,824	80,729	89,468	167,304	521,913	2,695,770	3,217,683
2002.9026	Cold Startup Training	Option 1	All Other	12,674	3,133	18,053	23,962	21,708	30,306	33,587	62,807	206,231	1,012,015	1,218,246
2003.9031	In-Advance Tests in U.S.	Option 1	All Other	-	22,688	130,746	173,543	157,214	219,488	243,249	454,871	1,401,798	7,329,321	8,731,119
2003.9032	In-Advance Tests in Europe	Option 1	All Other	-	10,211	58,841	78,101	70,752	98,778	109,471	204,710	630,864	3,298,480	3,929,344
2004.9041	Aqueous Polishing	Option 1	All Other	-	69,881	402,703	534,518	484,224	676,029	749,214	1,401,019	4,317,587	22,574,569	26,892,156
2004.9042	MOX Process	Option 1	All Other	-	61,113	352,176	467,451	423,467	591,207	655,209	1,225,231	3,775,853	19,742,106	23,517,959
2004.9043	Balance of Plant	Option 1	All Other	-	51,688	297,690	395,131	357,953	499,741	553,842	1,035,675	3,191,690	16,687,799	19,879,489
2004.9044	Reaction to General Incident (RGI)	Option 1	All Other	-	9,947	57,321	76,083	68,924	96,226	106,643	199,420	614,563	3,213,251	3,827,814
2004.9047	Turnover & Logistics	Option 1	All Other	-	35,076	202,137	268,301	243,056	339,332	376,067	703,240	2,167,209	11,331,287	13,498,496
2201.8144	Industrial Safety Program	Option 1	All Other	-	-	-	602	1,624	1,697	2,074	1,254	7,251	20,429	27,680
2201.8145	Waste Management Program	Option 1	All Other	-	-	-	177	479	500	611	369	2,137	6,019	8,156
2201.8146	Fitness for Duty Program	Option 1	All Other	-	-	-	(908)	(2,450)	(2,559)	(3,129)	(1,891)	(10,937)	(30,813)	(41,750)
2201.8147	Emergency Preparedness Program	Option 1	All Other	-	-	-	(28,767)	(77,623)	(81,093)	(99,134)	(59,918)	(346,536)	(976,277)	(1,322,813)
2202.8139	Field Office Supplies	Option 1	All Other	-	-	-	2,947	7,953	8,309	10,157	6,139	35,506	100,029	135,535
2202.9004	Field Office Supplies	Option 1	All Other	-	-	-	52,937	142,842	149,227	182,426	110,260	637,691	1,796,532	2,434,223
2202.9506	Field Office Supplies	Option 1	All Other	-	-	-	10,477	28,270	29,533	36,104	21,822	126,205	355,552	481,757
9008.0901	DOE Annual Costs for the SRS M&O Support to MOX for All Infrastructure	Option 1	All Other	-	283,447	1,378,230	2,283,301	1,750,522	1,196,765	1,282,933	1,193,477	9,368,674	19,080,594	28,449,268
9009.0901	DOE/WSRC Support	Option 1	All Other	6,130,233	(61,077)	(296,980)	(492,004)	(377,202)	(257,878)	(276,446)	(257,170)	4,111,476	(4,111,476)	(0)
9009.0902	DOE Annual Costs for the SRS M&O Support to MOX for Infrastructure S	Option 1	All Other	3,254,332	940,740	4,574,249	7,578,116	5,809,861	3,971,979	4,257,966	3,961,069	34,348,310	63,327,168	97,675,478
9009.0903	DOE Tech Spt. (Non-MOX Services Cost)	Option 1	All Other	16,879,927	1,209,910	5,883,061	9,746,413	7,472,213	5,108,465	5,476,281	5,094,434	56,870,703	81,446,721	138,317,424
All Other Total				\$ 32,983,125	\$ 3,842,226	\$ 17,916,166	\$ 25,359,964	\$ 20,357,883	\$ 16,960,872	\$ 18,242,959	\$ 19,295,353	\$ 154,958,548	\$ 299,219,220	\$ 454,177,767
Option 1 Total				\$ 123,274,297	\$ 25,834,311	\$ 111,090,125	\$ 143,566,271	\$ 201,851,671	\$ 266,414,257	\$ 315,720,569	\$ 170,046,630	\$ 1,357,798,132	\$ 1,421,024,348	\$ 2,778,822,480
0110.5101	NRC Costs - MFFF	Base		\$ 12,492,680	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	12,492,680	\$ -	12,492,680
0110.5301	Environmental Report	Base		1,827,146	(1,009)	(2,863)	(3,638)	(2,678)	(2,902)	(2,669)	(772)	1,810,614	(1,780)	1,808,835
0110.5302	Electrolyzer Testing	Base		268,674	-	-	-	-	-	-	-	268,674	-	268,674
0110.5303	ORNL Gallium Testing	Base		100,000	-	-	-	-	-	-	-	100,000	-	100,000
0110.5304	ORNL Criticality Review	Base		150,000	-	-	-	-	-	-	-	150,000	-	150,000
0110.5305	Clemson University Research	Base		1,300,232	(0)	(0)	(0)	(0)	(0)	(0)	(0)	1,300,232	(0)	1,300,232
0110.5306	Development & Test Programs	Base		2,061,991	-	-	-	-	-	-	-	2,061,991	-	2,061,991
0110.5307	Site Develop./Infrast. Improvement OPC Work	Base		496,072	-	-	-	-	-	-	-	496,072	-	496,072
0110.5308	SCE Scanner Testing	Base		506,071	0	0	0	0	0	0	0	506,071	0	506,071
0110.5401	MFFF Operations Planning	Base		3,402	8	23	29	21	23	21	6	3,532	14	3,546
0110.5402	Safety & Systems Integration	Base		213,271	0	0	0	0	0	0	0	213,271	0	213,271
0110.5411	Licensing	Base		5,093,626	(1,916)	(5,437)	(6,910)	(5,087)	(5,311)	(5,070)	(1,465)	5,062,231	(3,380)	5,058,850
0110.5421	Engineering Support to Licensing - PDG	Base		88,152	-	-	-	-	-	-	-	88,152	-	88,152
0110.5422	Engineering Support to Licensing - PDG	Base		104,088	(28)	(78)	(100)	(73)	(80)	(73)	(21)	103,635	(49)	103,586
0110.5423	Engine+H100/iering Support to Licensing - C/S	Base		116,314	(216)	(612)	(778)	(573)	(620)	(571)	(165)	112,780	(280)	112,400
0110.5424	Eng. Support to Lic. - Mech.Prog.	Base		195,855	(107)	(305)	(387)	(285)	(309)	(284)	(82)	194,095	(190)	193,905
0110.5425	Eng. Support to Lic. - Elect/ I&C/S&S/MC&A	Base		25,949	0	0	0	0	0	0	0	25,949	0	25,950
0110.5427	Engr Support to Lic - Nuclear Safety	Base		4,866,167	(3,360)	(9,535)	(12,118)	(8,921)	(9,644)	(8,891)	(2,570)	4,811,108	(5,928)	4,805,180
0110.5428	MFFF Environmental / Permitting	Base		325,655	(69)	(195)	(248)	(183)	(198)	(182)	(53)	324,527	(121)	324,405
0110.5431	Facility Security Vulnerability Assessment	Base		181,482	-	-	-	-	-	-	-	181,482	-	181,482
0110.5432	Facility Licensing Plans	Base		2,301,401	0	0	0	0	0	0	0	2,301,401	0	2,301,401
0110.5450	Miscellaneous Studies	Base		808,170	(0)	(0)	(0)	(0)	(0)	(0)	(0)	808,170	(0)	808,170
0110.5451	Coord. & Oversight of CETL Research Projects	Base		186,059	1,345	3,816	4,850	3,570	3,868	3,558	1,028	208,093	2,372	210,465
0110.5452	CAB Change Phase II Scoping & Devel	Base		178,090	-	-	-	-	-	-	-	178,090	-	178,090

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CB&I AREVA MOX Services, LLC.
MFFF Project Costs - Timephased 2007 Baseline by Cost Account and Claim Category⁽¹⁾

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I] = A+B+...H	[J]	[K] = I+J
				Pre-June 2007	June 2007 - September 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	October 2012 - April 2013	Subtotal Through April 2013	ETC	Total
0110.5453	Monitoring & Inspection Impacts Study	Base		30,700	0	0	0	0	0	0	0	30,700	0	30,700
0110.5454	CAB Phase II	Base		3,950	-	-	-	-	-	-	-	3,950	-	3,950
0110.5455	Maximize the use of MFFF Study	Base		16,488	(908)	(2,578)	(3,276)	(2,412)	(2,413)	(2,404)	(695)	1,603	(1,403)	0
0110.5499	Control Area Boundary Change Scoping	Base		732,197	-	-	-	-	-	-	-	732,197	-	732,197
0111.1101	General	Base		5,011,816	800	2,270	2,885	2,124	2,301	2,117	612	5,024,924	1,411	5,026,335
0111.1102	Mobilization, De-Mob, & Close-out	Base		888,051	-	-	-	-	-	-	-	888,051	-	888,051
0111.1103	Management	Base		5,963,957	389	1,103	1,402	1,032	1,118	1,029	297	5,970,329	686	5,971,015
0111.1104	Administrative	Base		2,662,459	(134)	(380)	(483)	(355)	(385)	(354)	(102)	2,660,266	(236)	2,660,030
0111.1105	Support Services	Base		5,356,274	72	204	259	191	207	190	55	5,357,453	127	5,357,579
0111.1106	Miscellaneous	Base		754,458	97	275	349	257	209	256	74	756,045	171	756,216
0111.1107	General Expenses	Base		39	-	-	-	-	-	-	-	39	-	39
0111.1107	General Expenses	Base		14,247,623	26,568	75,393	95,821	70,539	76,418	70,301	20,321	14,682,983	46,874	14,729,857
0111.1108	Procedure Development	Base		29	-	-	-	-	-	-	-	29	-	29
0112.8301	MDG Base Contract (Pre FY 2003)	Base		4,739,445	134	381	485	357	387	356	103	4,741,648	237	4,741,885
0113.1301	General	Base		16,144,860	3,213	9,119	11,589	8,531	9,243	8,503	2,458	16,197,515	5,669	16,203,184
0113.1302	Receiving	Base		812,940	0	0	0	0	0	0	0	812,940	0	812,940
0113.1303	Powder	Base		2,908,689	-	-	-	-	-	-	-	2,908,689	-	2,908,689
0113.1304	Pellets	Base		2,065,684	-	-	-	-	-	-	-	2,065,684	-	2,065,684
0113.1305	Cladding	Base		1,414,974	(0)	(0)	(0)	(0)	(0)	(0)	(0)	1,414,974	(0)	1,414,974
0113.1306	Assembling	Base		968,526	0	0	0	0	0	0	0	968,526	0	968,526
0113.1307	Laboratory	Base		556,952	15	42	53	39	42	39	11	557,193	26	557,218
0113.1308	Samples Pneumatic Transfer	Base		191,095	0	0	0	0	0	0	0	191,095	0	191,095
0113.1309	Waste Management	Base		436,191	0	0	0	0	0	0	0	436,191	0	436,191
0113.1310	Material Control & Accountability	Base		325,233	-	-	-	-	-	-	-	325,233	-	325,233
0113.1311	Process Control	Base		422,428	-	-	-	-	-	-	-	422,428	-	422,428
0113.1312	Integrated Safety Analysis	Base		5,059,365	(0)	(0)	(0)	(0)	(0)	(0)	(0)	5,059,365	(0)	5,059,365
0113.1313	Facility Input	Base		819,271	0	0	0	0	0	0	0	819,271	0	819,271
0113.1399	PDG MOX Process Unplanned Work	Base		386,378	(0)	(0)	(0)	(0)	(0)	(0)	(0)	386,378	(0)	386,378
0114.1401	General	Base		4,933,102	3,272	9,284	11,800	8,686	9,410	8,657	2,502	4,986,714	5,772	4,992,486
0114.1402	Dissolution	Base		4,389,754	(0)	(0)	(0)	(0)	(0)	(0)	(0)	4,389,754	(0)	4,389,754
0114.1403	Purification	Base		3,985,738	-	-	-	-	-	-	-	3,985,738	-	3,985,738
0114.1404	Conversion	Base		1,661,571	(0)	(0)	(0)	(0)	(0)	(0)	(0)	1,661,571	(0)	1,661,571
0114.1405	Facility Input	Base		3,071,732	0	0	0	0	0	0	0	3,071,732	0	3,071,732
0114.1406	Safety	Base		7,380,861	13,461	38,198	48,548	35,739	38,718	35,618	10,296	7,601,438	23,749	7,625,187
0115.1501	General	Base		13,575,970	(2,114)	(6,000)	(7,625)	(5,613)	(6,081)	(5,594)	(1,617)	13,541,325	(3,730)	13,537,594
0115.1501	General	Base		16,170	(891)	(2,528)	(3,213)	(2,365)	(2,562)	(2,357)	(681)	1,572	(1,572)	0
0115.1502	Buildings, Structures & Yard	Base		37,251,740	16,178	45,909	58,348	42,953	46,533	42,808	12,374	37,516,843	28,543	37,545,386
0115.1503	Deliverables	Base		20,290	0	0	0	0	0	0	0	20,290	0	20,290
0115.1504	Mechanical Programs	Base		3,406,553	13,306	37,758	47,989	35,327	38,272	35,208	10,177	3,624,589	23,475	3,648,065
0115.1504	Mechanical Programs	Base		13,364,136	775,873	2,201,760	2,798,322	2,059,992	2,231,699	2,053,054	593,440	26,078,275	1,368,887	27,447,162
0115.1505	Electrical Programs	Base		278,395	27,644	78,448	99,703	73,397	79,515	73,150	21,144	731,395	48,773	780,168
0115.1506	Nuclear Safety Programs	Base		14,140,122	284	805	1,023	753	816	751	217	14,144,770	500	14,145,270
0115.1507	Mechanical Systems & Components	Base		14,221,926	17,139	48,638	61,816	45,506	49,299	45,353	13,109	14,502,786	30,239	14,533,025
0115.1507	Mechanical Systems & Components	Base		11,884,214	65,228	185,104	235,258	173,186	187,621	172,602	49,891	12,953,104	115,084	13,068,188
0115.1508	Electrical Systems & Components	Base		27,435,880	335,456	951,951	1,209,880	890,656	964,896	887,657	256,579	32,932,955	591,851	33,524,806
0115.1509	Nuclear Safety Systems & Components	Base		2,659,638	3,103	8,805	11,191	8,238	8,925	8,210	2,373	2,710,482	5,474	2,715,956
0115.1510	Process Mechanical	Base		14,697,198	19,038	54,026	68,664	50,547	54,761	50,377	14,562	15,009,174	33,589	15,042,764
0115.1511	Mechanical Gloveboxes	Base		5,814,734	285	810	1,030	758	821	755	218	5,819,412	504	5,819,916
0115.1512	Site Development / Infrastructure Improvement	Base		1,931,365	9,396	26,663	33,887	24,946	27,025	24,862	7,186	2,085,331	16,577	2,101,908
0115.1513	Plant Design System	Base		1,360,418	16,428	46,619	59,251	43,618	47,253	43,471	12,565	1,629,623	28,984	1,658,608
0115.1513	Plant Design System	Base		19,616,251	895,854	2,542,240	3,231,055	2,378,549	2,576,809	2,370,539	685,209	34,295,607	1,580,572	35,877,079
0116.1601	DNFSB & Commonality Questions & Issues	Base		8,536	(470)	(1,335)	(1,696)	(1,249)	(1,353)	(1,244)	(360)	830	(830)	0
0116.8401	SDG Base Contract Pre-FY 2003	Base		2,516,494	-	-	-	-	-	-	-	2,516,494	-	2,516,494
0117.1701	Licensing	Base		14,903,169	(2,505)	(7,107)	(9,033)	(6,650)	(7,204)	(6,627)	(1,916)	14,862,127	(4,419)	14,857,708
0117.1702	Environmental Report	Base		6,678	-	-	-	-	-	-	-	6,678	-	6,678
0117.1703	Environment	Base		462,246	(480)	(1,363)	(1,733)	(1,275)	(1,382)	(1,271)	(367)	454,374	(848)	453,526
0117.1704	Safety & Health	Base		705,443	(406)	(1,151)	(1,463)	(1,077)	(1,167)	(1,074)	(310)	698,793	(716)	698,078
0117.1705	Emergency Planning	Base		152,633	(20)	(56)	(71)	(52)	(57)	(52)	(15)	152,310	(35)	152,275
0117.1706	ISA Support (Contractor's ODCs)	Base		19,967,267	(1,273)	(3,612)	(4,591)	(3,380)	(3,661)	(3,368)	(974)	19,946,408	(2,246)	19,944,162
0117.1707	Technology Assessment (TA) Support	Base		1,502,765	0	0	0	0	0	0	0	1,502,765	0	1,502,765
0117.1710	UCNI Training	Base		92,936	(3)	(7)	(9)	(7)	(7)	(7)	(2)	92,895	(4)	92,890
0118.1801	Office rent, suppl/serv, equi& furnit L&P	Base		2,995,728	85	241	307	226	245	225	65	2,997,121	150	2,997,271
0118.1802	Furniture	Base		2,378,914	-	-	-	-	-	-	-	2,378,914	-	2,378,914
0118.1803	Cabling & Telephone	Base		94,023	-	-	-	-	-	-	-	94,023	-	94,023
0118.1804	Upfit	Base		387,935	-	-	-	-	-	-	-	387,935	-	387,935

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CB&I AREVA MOX Services, LLC.
MFFF Project Costs - Timephased 2007 Baseline by Cost Account and Claim Category⁽¹⁾

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I] = A+B+...H	[J]	[K] = I+J
				Pre-June 2007	June 2007 - September 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	October 2012 - April 2013	Subtotal Through April 2013	ETC	Total
0118.1805	Relocation Services	Base		10,495	-	-	-	-	-	-	-	10,495	-	10,495
0118.1806	Remote Location Office Space	Base		414,673	(97)	(275)	(350)	(257)	(279)	(257)	(74)	413,084	(171)	412,913
0119.1901	Computer Equipment & Software L&P	Base		5,681,815	(2,107)	(5,979)	(7,599)	(5,994)	(6,060)	(5,579)	(1,611)	5,647,291	(3,717)	5,643,574
0119.1902	Software	Base		1,136,702	(0)	(0)	(0)	(0)	(0)	(0)	(0)	1,136,702	(0)	1,136,702
0119.1903	Service Contracts	Base		283,607	-	-	-	-	-	-	-	283,607	-	283,607
0119.1904	Initial Setup	Base		13,054	(8)	(23)	(29)	(21)	(23)	(21)	(6)	12,924	(14)	12,910
0120.8110	Project Management Pre-Construction Planning	Base		4,945,005	(0)	(0)	(0)	(0)	(0)	(0)	(0)	4,945,005	(0)	4,945,005
0120.8120	Project Controls Pre-Construction	Base		2,536,122	(2,072)	(5,879)	(7,472)	(5,501)	(5,999)	(5,482)	(1,585)	2,502,172	(3,655)	2,498,517
0120.8130	Project QA Pre-Construction	Base		-	-	-	-	-	-	-	-	-	-	-
0120.8140	Project ES&H Pre-Construction	Base		765,345	-	0	0	0	0	0	0	765,345	0	765,345
0120.8160	Project Services & Admin Pre-Construction	Base		62,741	-	-	-	-	-	-	-	62,741	-	62,741
0120.8170	Procure/Subcontract Admin Pre-Construction	Base		270,533	(0)	(0)	(0)	(0)	(0)	(0)	(0)	270,533	(0)	270,533
0120.8200	PreOptIBConstrPrjTitleIII EngineeringMgmt-LL EnginProcurement	Base		3,175	-	-	-	-	-	-	-	3,175	-	3,175
0120.8210	Engineering Civil / Structural Pre-Construction	Base		179,711	-	-	-	-	-	-	-	179,711	-	179,711
0120.8220	Engineering Mechanical Pre-Construction	Base		53,541	-	-	-	-	-	-	-	53,541	-	53,541
0120.8230	Engineering Electrical / I&C Pre-Construction	Base		61,123	-	-	-	-	-	-	-	61,123	-	61,123
0121.1654	MFFF Operations Planning	Base		4,509,821	(554)	(1,572)	(1,998)	(1,471)	(1,594)	(1,466)	(424)	4,500,742	(978)	4,499,764
0121.1654	MFFF Operations Planning	Base		3,618,614	182,256	517,204	657,340	483,902	524,237	482,273	139,402	6,602,228	321,558	6,926,786
0122.1611	PuO2 Polishing Planning	Base		85,261	32,236	91,479	116,266	85,589	92,723	85,301	24,656	613,512	56,875	670,387
0122.1612	DUO2 Supply Planning	Base		513,193	0	0	0	0	0	0	0	513,193	0	513,193
0661.6101	Project Office Operations	Base		6,360,257	(1,901)	(6,111)	(5,763)	(5,833)	(5,316)	(6,356)	(3,773)	6,325,204	(35,374)	6,289,830
0661.6102	Personnel Relocations	Base		35,173	-	-	-	-	-	-	-	35,173	-	35,173
0661.6103	Project Support Services	Base		-	-	-	-	-	-	-	-	-	-	-
0661.6105	Mixed Oxide (MOX) Proj. Ext. Communications	Base		446,423	1	2	2	2	2	2	1	446,435	12	446,447
0661.6106	IT Labor	Base		3,769,969	41	132	125	126	115	138	82	3,769,969	766	3,770,735
0661.6110	Independent Review Team (IRT) Review - N/AS4	Base		1,482,976	(189)	(609)	(574)	(581)	(530)	(633)	(376)	1,479,483	(3,525)	1,475,958
0661.6150	Relocations	Base		2,564,155	13,272	42,654	40,225	40,712	37,107	44,364	26,337	2,808,827	246,915	3,055,742
0662.6201	Project Controls & Integration	Base		14,089,905	(819)	(2,633)	(2,483)	(2,513)	(2,291)	(2,739)	(1,626)	14,074,802	(15,242)	14,059,560
0662.6202	Risk Management	Base		943,982	(121)	(389)	(367)	(372)	(339)	(405)	(240)	941,748	(2,255)	939,493
0663.6301	QA Program Management & Administration	Base		614,908	(291)	(936)	(882)	(893)	(814)	(973)	(578)	609,541	(5,416)	604,125
0663.6302	Quality Engineering	Base		1,220,126	(295)	(894)	(894)	(905)	(825)	(986)	(586)	1,214,687	(5,489)	1,209,198
0663.6303	Quality Verification	Base		1,294,971	(3)	(8)	(8)	(8)	(7)	(9)	(5)	1,294,924	(48)	1,294,876
0664.6401	ES&H Integration	Base		1,353,088	(215)	(691)	(651)	(659)	(601)	(718)	(426)	1,349,126	(3,998)	1,345,129
0664.6402	Regulatory Affairs Management & Admin.	Base		452,998	0	0	0	0	0	0	0	452,998	0	452,998
0664.6403	Safety and Health	Base		75	-	-	-	-	-	-	-	75	-	75
0664.6404	Incident Investigation / Corrective Action Program	Base		(53)	1	5	4	4	4	5	3	(27)	27	(0)
0665.6501	Trade-off Studies	Base		1,272	1	2	2	2	1	2	1	1,281	9	1,291
0665.6502	Plutonium (Pu) Disposition Study	Base		442	(12)	(38)	(36)	(37)	(33)	(40)	(24)	222	(222)	0
0666.6600	Project Services & Administration	Base		1,670	-	-	-	-	-	-	-	1,670	-	1,670
0666.6601	Contracts	Base		18,795,203	(2,361)	(7,587)	(7,155)	(7,242)	(6,601)	(7,892)	(4,685)	18,751,681	(43,921)	18,707,760
0666.6602	Administration	Base		2,916,283	202	650	613	620	565	676	401	2,920,010	3,762	2,923,771
0666.6603	Electronic Doc / Records Management	Base		1,788,884	0	0	0	0	0	0	0	1,788,884	0	1,788,884
0666.6604	Training & Internal Communication	Base		351,687	(531)	(1,707)	(1,609)	(1,629)	(1,485)	(1,775)	(1,054)	341,898	(9,879)	332,019
0666.6605	Project Accounting / Finance	Base		2,947,939	(519)	(1,666)	(1,572)	(1,591)	(1,450)	(1,733)	(1,029)	2,938,380	(9,647)	2,928,733
0666.6606	Bank Analysis Fees	Base		3,097	-	-	-	-	-	-	-	3,097	-	3,097
0666.6608	Procurement	Base		3,017,076	(73)	(234)	(221)	(224)	(204)	(244)	(145)	3,015,732	(1,356)	3,014,377
0666.6609	Asset Management	Base		294,085	(0)	(0)	(0)	(0)	(0)	(0)	(0)	294,085	(0)	294,085
0667.6701	Licensing	Base		4,830	-	-	-	-	-	-	-	4,830	-	4,830
0668.6801	Charlotte Office Space	Base		51,795	30	97	91	93	84	101	60	52,351	562	52,913
0668.6802	Furniture	Base		33,304	0	0	0	0	0	0	0	33,304	0	33,304
0668.6803	Cabling & Telephone	Base		(17,325)	468	1,503	1,418	1,435	1,308	1,564	928	(8,702)	8,702	0
0668.6804	UpFit	Base		3,843	(51)	(163)	(154)	(155)	(142)	(169)	(101)	2,999	(943)	1,966
0668.6805	Relocation Services	Base		2,456	(15)	(47)	(44)	(45)	(41)	(49)	(29)	2,188	(271)	1,917
0668.6806	Remote Location Office Space	Base		46,201	-	-	-	-	-	-	-	46,201	-	46,201
0668.6810	Office Rent, Supplies, & Services	Base		5,802,326	(252)	(811)	(765)	(774)	(706)	(844)	(501)	5,797,671	(4,697)	5,792,974
0668.6811	Office Equipment & Furniture Lease & Purchase	Base		2,605,017	(123)	(394)	(372)	(376)	(343)	(410)	(243)	2,602,757	(2,281)	2,600,476
0668.6812	Computer Equipment and Software Leases & Purchases	Base		8,129,461	(1,560)	(5,013)	(4,728)	(4,785)	(4,361)	(5,214)	(3,095)	8,100,703	(29,021)	8,071,682
0668.8810	Offsite Office Rent, Supplies & Services	Base		3,293,692	(0)	(0)	(0)	(0)	(0)	(0)	(0)	3,293,692	(0)	3,293,692
0668.8811	Offsite Off.Equip.& Furnit. L. & P., and Workspace Upfit	Base		326,998	(0)	(0)	(0)	(0)	(0)	(0)	(0)	326,998	(0)	326,998
0668.8812	Offsite Computer Equip.& Software L.& P.	Base		728,823	-	-	-	-	-	-	-	728,823	-	728,823
0669.6901	Computer Hardware	Base		74,832	(5)	(15)	(14)	(14)	(13)	(15)	(9)	74,747	(86)	74,662
0669.6902	Computer Software	Base		21,655	(2)	(6)	(6)	(6)	(5)	(6)	(4)	21,619	(36)	21,584
0669.6903	Computer Services Contracts	Base		18,228	(17)	(54)	(51)	(52)	(47)	(56)	(34)	17,916	(314)	17,602
0669.6904	Initial Setup	Base		(7,860)	237	763	719	728	663	793	471	(3,485)	4,415	930
0670.8299	Process Unit Assembly Planning	Base		2,251,086	(135)	(435)	(410)	(415)	(378)	(452)	(269)	2,248,591	(2,518)	2,246,073

Schedule 7.21

CB&I AREVA MOX Services, LLC.
MFFP Project Costs - Timephased 2007 Baseline by Cost Account and Claim Category⁽¹⁾

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I] = A+B+...H	[J]	[K] = I+J
				Pre-June 2007	June 2007 - September 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	October 2012 - April 2013	Subtotal Through April 2013	ETC	Total
1204.8240	PEG BOA's, Sole Source & Adv. Procure. Items	Base		4,160,079	121,173	454,709	645,820	776,097	584,842	388,320	129,459	7,260,500	360,760	7,621,259
1204.8241	PEG Management	Base		5,486,175	100,225	376,098	534,170	641,925	483,734	321,187	107,078	8,050,592	298,391	8,348,983
1204.8242	PEG Training & Technical Support	Base		3,721,403	26,576	99,729	141,645	170,218	128,270	85,168	28,394	4,401,403	79,124	4,480,527
1204.8243	PEG Build to Print Manuf./Install. Required	Base		342,295	2,480	9,307	13,218	15,885	11,970	7,948	2,650	405,753	7,384	413,137
1204.8244	PEG AP/MP Laboratory Design/Build	Base		666,147	29,962	112,436	159,692	191,905	144,613	96,020	32,011	1,432,786	89,205	1,521,991
1204.8245	PEG Documents External Review Support	Base		169,943	7,880	29,571	42,000	50,473	38,034	25,254	8,419	371,575	23,462	395,037
1204.8246	Process Support AP/MP Lab Design/Build	Base		602,461	36,756	137,930	195,901	235,419	177,404	117,792	39,270	1,542,931	109,432	1,652,363
1204.8247	ProcOpt1ACnstPrjctProcUnitPEGVendorDesign	Base		4,390,296	587,308	2,203,903	3,130,190	3,761,623	2,834,636	1,882,128	627,467	19,417,551	1,748,545	21,166,096
1204.8248	ProcOpt1BProcUnitsPEG Design/Bld UnitSpecs	Base		6,756,886	37,826	141,943	201,600	242,268	182,565	121,219	40,412	7,724,718	112,615	7,837,333
1204.8249	ProcOpt1ACnstPrjct Proc Units PEG ODCs	Base		540,670	19,519	73,247	104,032	125,018	94,210	62,553	20,854	1,040,103	58,113	1,098,216
1204.8250	Mech/Struct Procurements Engineering	Base		-	(768)	(2,884)	(4,096)	(4,922)	(2,463)	(821)	(19,463)	(2,388)	-	(21,951)
1205.8250	US Regulations/ Process Requirements	Base		3,323,661	47,331	177,611	252,259	303,146	228,441	151,679	50,567	4,534,694	140,914	4,675,608
1205.8251	ProcOpt1BConstPrjProc-USRG/PRG Req Mgmt	Base		1,450,431	7,142	26,800	38,064	45,743	34,470	22,887	7,630	1,633,169	21,263	1,654,432
1205.8252	US Regulations Personnel	Base		1,968,062	(409)	(1,536)	(2,181)	(2,621)	(1,975)	(1,311)	(437)	1,957,591	(1,218)	1,956,373
1205.8253	Process Requirements Personnel	Base		3,593,476	22,664	85,046	120,790	145,157	109,385	72,629	24,213	4,173,361	67,474	4,240,835
1205.8254	Pre-Option 1A Construction Project Process-General Support	Base		1,568,357	(412)	(1,546)	(2,196)	(2,639)	(1,989)	(1,321)	(440)	1,557,812	(1,227)	1,556,585
1205.8255	ProcOpt1ACnstPrjProc-USRG/PRG Admin Spt	Base		-	7	28	40	48	36	24	8	191	22	213
1205.8256	Facility Design Group Support to PEG	Base		421,841	440	1,652	2,346	2,820	2,125	1,411	470	433,105	1,311	434,416
1205.8257	Systems Engineering Group Support to I55EG	Base		252,110	(164)	(615)	(874)	(1,050)	(792)	(526)	(175)	247,914	(488)	247,426
1205.8259	ProcOpt1ACnstPrjProc-USRG/PRG - ODCs	Base		877,970	2,979	11,179	15,877	19,080	14,378	9,547	3,183	954,192	8,869	963,061
1209.8290	Pre-Option 1B MDG, SDG & PEG Management	Base		4,519,134	11,797	44,269	62,875	75,558	56,938	37,805	12,604	4,820,979	35,122	4,856,102
1209.8291	DCS Equipment Group Management - ODCs	Base		548,416	129	485	689	827	624	414	138	551,721	385	552,106
1211.8131	Project QA - Option 1	Base		690,693	(290)	(1,087)	(1,544)	(1,855)	(1,398)	(928)	(310)	683,280	(863)	682,418
1211.8171	ProcOpt1BConstPrjMgmtPurchs Procurement - Mgt & Admin	Base		1,729,621	(0)	(0)	(0)	(0)	(0)	(0)	(0)	1,729,620	(0)	1,729,620
1212.8292	Commercial Grade Dedication (CGD)	Base		-	45,193	169,588	240,865	289,453	218,123	144,828	48,283	1,156,333	134,549	1,290,882
1212.8292	Commercial Grade Dedication (CGD)	Base		-	2,236	8,390	11,916	14,319	10,791	7,165	2,389	57,205	6,656	63,861
1212.8293	Chemical/Mechanical Subcontract Technical Representatives (STRs) and	Base		-	146,363	549,233	780,073	937,432	706,418	469,044	156,371	3,744,933	435,754	4,180,687
1212.8294	Electrical/I&C Procurements Engineering	Base		-	150,881	566,188	804,154	966,371	728,225	483,524	161,198	3,860,541	449,206	4,309,747
1212.8295	PEG Support of Others (Facility Eq)	Base		-	527	1,977	2,808	3,374	2,543	1,688	563	13,480	1,569	15,049
1212.8296	PassPort Implementation & Support Engineering	Base		-	91,476	343,270	487,544	585,893	441,510	293,152	97,731	2,340,576	272,245	2,612,921
1212.8297	PEG - Vendor Support Activities for Self Procurements	Base		-	11,330	42,518	60,388	72,569	54,686	36,310	12,105	289,906	33,733	323,639
1212.8297	PEG - Vendor Support Activities for Self Procurements	Base		-	770	2,890	4,105	4,933	3,717	2,468	823	19,707	2,293	22,000
1212.8298	PEG Management & Administration (Facility Eq)	Base		-	49,755	186,707	265,179	318,671	240,140	159,447	53,157	1,273,055	148,131	1,421,186
1301.8302	DCS Integrated Mgt	Base		4,199,266	121,052	500,812	412,605	352,172	198,278	40,848	(9,878)	5,815,155	-	5,815,155
1301.8303	MDG Support Services	Base		1,882,237	28,946	119,756	98,664	84,213	47,413	9,768	(2,362)	2,268,635	-	2,268,635
1301.8304	MDG Travel & Relocation - DCS	Base		2,715,466	35,269	145,914	120,215	102,607	57,769	11,901	(2,878)	3,186,264	-	3,186,264
1301.8305	Production Centers Mgt	Base		1,839,303	2	10	8	7	4	1	(0)	1,839,335	-	1,839,335
1301.8306	MDG Travel & Relocation Production Centers	Base		1,426,620	9,600	39,718	32,527	27,930	15,725	3,240	(783)	1,554,772	-	1,554,772
1301.8307	MDG ODCs Production Centers	Base		2,627,193	46,302	191,558	157,819	134,704	75,840	15,634	(3,778)	3,245,262	-	3,245,262
1301.8308	MDG Procurement Engineering Support	Base		840,496	(276)	(1,141)	(940)	(802)	(452)	(93)	22	836,816	-	836,816
1301.8390	Design Offices Mgt	Base		10,097,489	156,220	646,309	532,475	454,485	255,882	52,715	(12,748)	12,182,827	-	12,182,827
1301.8391	Production Internal Support	Base		7,492,722	159,578	660,199	543,919	464,254	261,382	53,848	(13,022)	9,622,880	-	9,622,880
1302.8309	Technical Management	Base		12,153,769	148,021	612,388	504,529	430,633	242,453	49,949	(12,079)	14,129,663	-	14,129,663
1302.8310	Technical Requirement Representatives	Base		3,558,507	13,055	54,013	44,500	37,982	21,384	4,405	(1,065)	3,732,781	-	3,732,781
1302.8392	Follow-up	Base		4,904,285	336,453	1,391,964	1,146,799	978,832	551,097	113,533	(27,456)	9,395,507	-	9,395,507
1302.839A	TSR Support from PDG	Base		-	50,126	207,381	170,855	145,831	82,105	16,915	(4,091)	669,122	-	669,122
1303.8312	NDD - PuO2 Can Receiving & Emptying	Base		819,753	5,108	21,132	17,410	14,860	8,367	1,724	(417)	887,937	-	887,937
1303.8313	NDP - Primary Dosing	Base		2,226,652	29,706	122,898	101,252	86,422	48,657	10,024	(2,424)	2,623,186	-	2,623,186
1303.8314	NDS - Final Dosing	Base		2,513,754	24,839	102,763	84,664	72,263	40,685	8,382	(2,027)	2,845,323	-	2,845,323
1303.8319	NTM - Jar Storage & Handling	Base		3,028,940	24,196	100,104	82,473	70,394	39,633	8,165	(1,975)	3,351,931	-	3,351,931
1303.8320	NXR - Powder Auxiliary	Base		1,297,586	12,092	50,025	41,215	35,178	19,806	4,080	(987)	1,458,995	-	1,458,995
1304.8311	DCE - PuO2 Buffer Storage	Base		588,797	11,597	47,977	39,527	33,738	18,995	3,913	(946)	743,598	-	743,598
1304.8312	NDD Conformance	Base		-	3,385	14,830	12,218	10,429	5,872	1,210	(26)	47,851	-	47,851
1304.8313	NDP Conformance	Base		-	90	372	306	261	147	30	(7)	1,199	-	1,199
1304.8314	NDS Conformance	Base		-	5,288	21,876	18,023	15,384	8,661	1,784	(432)	70,585	-	70,585
1304.8319	NTM Conformance	Base		-	1,123	4,648	3,829	3,268	1,840	379	(92)	14,997	-	14,997
1304.831A	VDR Design	Base		-	25,526	105,605	87,005	74,261	41,810	8,613	(2,083)	340,737	-	340,737
1304.831B	VDU Design	Base		-	14,289	59,116	48,704	41,570	23,405	4,822	(1,166)	190,740	-	190,740
1304.831C	DCM Design	Base		-	63,776	263,854	217,382	185,543	104,463	21,521	(5,204)	851,334	-	851,334
1304.831G	GMK Design	Base		-	18,777	77,684	64,001	54,627	30,756	6,336	(1,532)	250,649	-	250,649
1304.831H	SCE Design	Base		-	42,449	175,620	144,688	123,496	69,530	14,324	(3,464)	566,643	-	566,643
1304.831J	SMK Design	Base		-	40,709	168,422	138,758	118,435	66,680	13,737	(3,322)	543,419	-	543,419
1304.831L	SXE Design	Base		-	39,578	163,741	134,901	115,143	64,827	13,355	(3,230)	528,315	-	528,315
1304.831M	TAS Design	Base		-	45,676	188,971	159,688	132,885	74,816	15,413	(3,727)	609,723	-	609,723
1304.831N	TCL/TCK/TGJ Design	Base		-	54,527	225,589	185,856	158,635	89,314	18,400	(4,450)	727,871	-	727,871

Schedule 7.21

CB&I AREVA MOX Services, LLC.
MFFF Project Costs - Timephased 2007 Baseline by Cost Account and Claim Category⁽¹⁾

Cost Account	Cost Account Description	Contract	Claim Category	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I] = A+B+...H	[J]	[K] = I+J
				Pre- June 2007	June 2007 - September 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	October 2012 - April 2013	Subtotal Through April 2013	ETC	Total
1304.831P	TCP Design	Base		-	25,215	104,321	85,947	73,358	41,302	8,509	(2,058)	336,594	-	336,594
1304.831Q	TGM Design	Base		-	71,688	296,586	244,349	208,560	117,422	24,191	(5,850)	956,945	-	956,945
1304.831Y	LFX Design	Base		-	16,925	70,022	57,689	49,239	27,722	5,711	(1,381)	225,927	-	225,927
1304.8321	NCR - Scrap Processing	Base		2,999,121	25,800	106,739	87,939	75,059	42,259	8,706	(2,105)	3,343,517	-	3,343,517
1304.8324	PRE / PRF - Grinding	Base		1,523,693	28,757	118,973	98,018	83,662	47,103	9,704	(2,347)	1,907,562	-	1,907,562
1304.8325	PTE/PTF -- Pellet Inspect & Sorting	Base		-	24,469	101,231	83,401	71,186	40,079	8,257	(1,997)	326,626	-	326,626
1304.8326	PQE -- Quality Control & Manual Sorting	Base		-	(0)	(0)	(0)	0	(0)	0	(0)	(0)	-	(0)
1304.8327	PAD - Pellet Repackaging	Base		219,137	2,314	9,575	7,888	6,733	3,791	781	(189)	250,030	-	250,030
1304.8328	PAR - Scrap Box Loading	Base		352,683	1,404	5,808	4,785	4,084	2,299	474	(115)	371,422	-	371,422
1304.8329	PSE - Green Pellet Storage	Base		404,451	4,648	19,231	15,844	13,523	7,614	1,569	(379)	466,501	-	466,501
1304.832A	KCB Design	Base		-	17,174	71,052	58,538	49,964	28,131	5,795	(1,401)	229,253	-	229,253
1304.832G	KDA Design	Base		-	25,740	106,490	87,734	74,884	42,161	8,686	(2,100)	343,594	-	343,594
1304.8330	PSF - Sintered Pellet Storage	Base		520,040	4,354	18,015	14,842	12,668	7,132	1,469	(355)	578,166	-	578,166
1304.8331	PSI - Scrape Pellet Storage	Base		896,911	1,878	7,771	6,402	5,464	3,077	634	(153)	921,984	-	921,984
1304.8332	PSJ - Ground & Sorted Pellet Storage	Base		637,725	5,586	23,111	19,041	16,252	9,150	1,885	(456)	712,294	-	712,294
1304.8333	PML - Pellet Handling	Base		3,352,237	25,631	106,040	87,364	74,568	41,983	8,649	(2,092)	3,694,380	-	3,694,380
1304.8336	GDE - Rod Decladding	Base		300,245	18,433	76,262	62,830	53,628	30,193	6,220	(1,504)	546,308	-	546,308
1304.8338	SEK Helium Leak Test	Base		135,819	14,080	58,252	47,992	40,963	23,063	4,751	(1,149)	323,770	-	323,770
1304.8344	LCT - Test Line	Base		257,569	22,136	91,581	75,451	64,400	36,258	7,470	(1,806)	553,058	-	553,058
1304.8346	DDP - UO2 Drum Emptying	Base		174,431	17,453	72,205	59,488	50,775	28,587	5,889	(1,424)	407,403	-	407,403
1304.8348	KDM Conformance	Base		-	6,612	27,355	22,537	19,236	10,830	2,231	(540)	88,262	-	88,262
1304.8363	KDA - Decanning (B)	Base		1,611,650	15,138	62,627	51,597	44,040	24,795	5,108	(1,235)	1,813,719	-	1,813,719
1304.8365	KPG Sampling, Automatic Conformance	Base		-	14,700	60,818	50,106	42,767	24,078	4,960	(1,200)	196,230	-	196,230
1304.8370	KPA 4010 Purification Cycle Conformance	Base		-	3,776	15,621	12,870	10,985	6,185	1,274	(308)	50,402	-	50,402
1304.8375	KDM - Milling (AFS) - PuO2 Can Handling	Base		432,078	3,751	15,517	12,784	10,912	6,143	1,264	(306)	482,144	-	482,144
1304.8376	KDM 2000 - Prepolishing Milling Conformance	Base		-	15,767	65,231	53,742	45,870	25,826	5,320	(1,287)	210,469	-	210,469
1304.8377	KDM 2200 Pre-Polishing Milling	Base		331,974	17,761	73,480	60,538	51,671	29,092	5,993	(1,449)	569,061	-	569,061
1304.8378	KDR 1/2/3/4 ADO Conform	Base		-	15,751	65,166	53,688	45,825	25,800	5,315	(1,285)	210,259	-	210,259
1304.8379	KDR - Recanning Unit	Base		-	44,962	186,015	153,253	130,806	73,646	15,172	(3,669)	600,185	-	600,185
1304.8397	Struct. LLE - Aiken	Base		74,131	20,867	86,330	71,125	60,707	34,179	7,041	(1,703)	352,677	-	352,677
1305.8315	LLP Pneumatic Transfer (33 mm)	Base		1,303,289	7,047	29,154	24,019	20,501	11,543	2,378	(575)	1,397,356	-	1,397,356
1305.8316	LLP Pneumatic Transfer (76 mm)	Base		623,051	8,672	35,878	29,559	25,230	14,205	2,926	(708)	738,814	-	738,814
1305.8318	NTP Pneumatic Transfer (133 mm)	Base		680,097	7,893	32,654	26,903	22,962	12,928	2,663	(644)	785,457	-	785,457
1305.8325	PTE/PTF - Pellet Inspect & Sorting	Base		1,667,730	-	-	-	-	-	-	-	1,667,730	-	1,667,730
1305.8326	PQE - QC & Manual Sorting	Base		1,252,303	13,897	57,493	47,367	40,430	22,762	4,689	(1,134)	1,437,808	-	1,437,808
1305.8361	KCB - PuO2 Homogenization & Sampling	Base		1,220,725	18,293	75,681	62,352	53,219	29,963	6,173	(1,493)	1,464,913	-	1,464,913
1305.8362	KCC - Canning	Base		1,392,935	13,989	57,873	47,680	40,696	22,913	4,720	(1,142)	1,579,664	-	1,579,664
1305.8365	KPG - Liquid Sampling (W1)	Base		938,353	-	-	-	-	-	-	-	938,353	-	938,353
1305.8366	KDB/KPB Electrolyzers (W9)	Base		791,117	33,135	137,083	112,939	96,397	54,273	11,181	(2,704)	1,233,421	-	1,233,421
1305.8367	KCA - Oxalic Precip Metering Wheels	Base		584,610	7,743	32,035	26,392	22,527	12,683	2,613	(632)	687,971	-	687,971
1305.8368	KDA - Dosing Hoppers (W6)	Base		1,687,364	11,518	47,653	39,260	33,509	18,866	3,887	(940)	1,841,117	-	1,841,117
1305.8369	KPA/KPB - Settler Mixers (W7)	Base		755,694	7,218	29,863	24,604	21,000	11,823	2,436	(589)	852,049	-	852,049
1305.8370	KPA 4010 Purification Cycle	Base		394,454	-	-	-	-	-	-	-	394,454	-	394,454
1305.8371	KCA - Oxalic Precip Oxid Precip & Filter	Base		473,525	5,942	24,584	20,254	17,287	9,733	2,005	(485)	552,846	-	552,846
1305.8372	KCA - Oxalic Precip Oxid Calcin Furn.	Base		812,692	814	3,367	2,774	2,368	1,333	275	(66)	823,556	-	823,556
1305.8373	KCB - PuO2 Tumbler Mixer	Base		544,678	(62)	(255)	(210)	(180)	(101)	(21)	5	543,854	-	543,854
1305.8374	KDD - Dechlorination / Dissolution	Base		2,367,403	13,323	55,119	45,411	38,760	21,822	4,496	(1,087)	2,545,246	-	2,545,246
1305.8376	KDM - Milling (AFS)	Base		1,994,226	(0)	(0)	(0)	(0)	(0)	(0)	(0)	1,994,225	-	1,994,225
1305.8378	KDR - Recanning Unit	Base		1,619,027	(2,350)	(9,721)	(8,009)	(6,836)	(3,849)	(793)	192	1,587,663	-	1,587,663
1305.8380	KPB 1000 Solvent Recovery	Base		504,804	13,715	56,739	46,746	39,899	22,464	4,628	(1,119)	687,875	-	687,875
1305.8381	KDM-Pre-Polishing MillingUnits6000-7400 Dsgn	Base		1,060,103	7,197	29,775	24,531	20,938	11,788	2,429	(587)	1,156,174	-	1,156,174
1305.8399	Dosing Hopper - Structural Qualification	Base		-	4,135	17,108	14,095	12,030	6,773	1,395	(337)	55,200	-	55,200
1306.8322	NPE/NPF - Homogenization & Pelletizing	Base		1,439,711	0	0	0	0	0	0	(0)	1,439,711	-	1,439,711
1306.8323	PFE/PTF - Sintering Furnace	Base		8	-	-	-	-	-	-	-	8	-	8
1306.8334	GME - Rod Cladding & Decontamination	Base		5,116,811	57,681	238,636	196,606	167,809	94,479	19,464	(4,707)	5,886,780	-	5,886,780
1306.8339	SDK - Rod Inspection & Sorting	Base		1,146,747	(1,987)	(8,219)	(6,772)	(5,780)	(3,254)	(670)	162	1,120,227	-	1,120,227
1306.8347	NBX/NBY - Ball Mining	Base		2,021,092	19,986	82,686	68,123	58,145	32,736	6,744	(1,631)	2,287,881	-	2,287,881
1306.8348	KDM - Milling	Base		924,499	(1,756)	(7,266)	(5,986)	(5,109)	(2,877)	(593)	143	901,055	-	901,055
1306.8349	NPQ/H/I-Homogenization & Pelletizing Design	Base		4,543,119	24,888	102,965	84,830	72,405	40,765	8,398	(2,031)	4,875,339	-	4,875,339
1306.8398	Struct. LLE - Bagnol	Base		100,476	36,425	150,694	124,153	105,969	59,662	12,291	(2,972)	586,697	-	586,697
1307.831A	VDR	Base		-	(7,458)	(30,856)	(25,421)	(21,698)	(12,216)	(2,517)	609	(99,558)	-	(99,558)
1307.831B	VDU	Base		-	(3,837)	(15,874)	(13,078)	(11,163)	(6,285)	(1,295)	313	(51,218)	-	(51,218)
1307.831C	DCM	Base		-	14,155	58,563	48,248	41,182	23,186	4,777	(1,155)	188,956	-	188,956
1307.831D	DCP	Base		-	-	-	-	-	-	-	-	-	-	-
1307.831E	VDQ	Base		-	-	-	-	-	-	-	-	-	-	-

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CB&I AREVA MOX Services, LLC.
MFFF Project Costs - Timephased 2007 Baseline by Cost Account and Claim Category⁽¹⁾

Cost Account	Cost Account Description	Contract	Claim Category	[A] Pre- June 2007	[B] June 2007 - September 2007	[C] FY 2008	[D] FY 2009	[E] FY 2010	[F] FY 2011	[G] FY 2012	[H] October 2012 - April 2013	[I] = A+B+...H Subtotal Through April 2013	[J] ETC	[K] = I+J Total
1307.831F	VDI	Base		-	-	-	-	-	-	-	-	-	-	-
1307.831G	GMK	Base		-	2,012	8,324	6,858	5,854	3,296	679	(164)	26,858	-	26,858
1307.831H	SCE	Base		-	27,742	114,771	94,557	80,707	45,440	9,361	(2,264)	370,314	-	370,314
1307.831J	SMK	Base		-	30,061	124,366	102,462	87,455	49,238	10,144	(2,453)	401,273	-	401,273
1307.831K	STK	Base		-	26,215	108,454	89,352	76,265	42,938	8,846	(2,139)	349,931	-	349,931
1307.831L	SXE	Base		-	7,412	30,663	25,263	21,562	12,140	2,501	(605)	98,936	-	98,936
1307.831M	TAS	Base		-	31	128	106	90	51	10	(3)	414	-	414
1307.831N	TCL/TCK/TGJ	Base		-	42,901	177,489	146,228	124,811	70,270	14,477	(3,501)	572,675	-	572,675
1307.831P	TCP	Base		-	555	2,295	1,891	1,614	909	187	(45)	7,405	-	7,405
1307.831Q	TGM	Base		-	6,276	25,965	21,392	18,258	10,280	2,118	(512)	83,776	-	83,776
1307.831R	TGV	Base		-	1,874	7,751	6,386	5,451	3,069	632	(153)	25,009	-	25,009
1307.831S	Grp 5.1	Base		-	-	-	-	-	-	-	-	-	-	-
1307.831T	Grp 5.2	Base		-	-	-	-	-	-	-	-	-	-	-
1307.831U	Grp 5.3	Base		-	-	-	-	-	-	-	-	-	-	-
1307.831X	Grp 5.6	Base		-	-	-	-	-	-	-	-	-	-	-
1307.831Y	Grp 5.8 / LEX	Base		-	(7,499)	(31,023)	(25,559)	(21,816)	(12,283)	(2,530)	612	(100,098)	-	(100,098)
1307.832A	KCB	Base		-	(2,809)	(11,623)	(9,576)	(8,174)	(4,602)	(948)	229	(37,503)	-	(37,503)
1307.832G	KDA	Base		-	(13,969)	(57,792)	(47,613)	(40,639)	(22,881)	(4,714)	1,140	(186,468)	-	(186,468)
1308.832A	KCB	Base		-	-	-	-	-	-	-	-	-	-	-
1308.832B	KCD	Base		-	-	-	-	-	-	-	-	-	-	-
1308.832C	KPA	Base		-	-	-	-	-	-	-	-	-	-	-
1308.832D	KPB	Base		-	-	-	-	-	-	-	-	-	-	-
1308.832E	KPC	Base		-	-	-	-	-	-	-	-	-	-	-
1308.832F	KWD	Base		-	-	-	-	-	-	-	-	-	-	-
1308.832G	KDA	Base		-	-	-	-	-	-	-	-	-	-	-
1308.832H	Grp 5.4	Base		-	-	-	-	-	-	-	-	-	-	-
1308.832J	Grp 5.5	Base		-	-	-	-	-	-	-	-	-	-	-
1309.839C	DCP Design	Base		-	92,381	382,197	314,881	268,762	151,317	31,173	(7,539)	1,233,174	-	1,233,174
1309.839D	SXE DCR 10-0422	Base		-	3,072	12,708	10,470	8,937	5,031	1,037	(251)	41,004	-	41,004
1309.83KU	K Unit Pumps and Valves Design	Base		-	224,876	930,349	766,488	654,223	368,338	75,883	(18,351)	3,001,805	-	3,001,805
1310.83LB	Lab Unit Glovebox Design	Base		-	512,320	2,119,553	1,746,240	1,490,474	839,160	172,878	(41,807)	6,838,818	-	6,838,818
1310.83LE	Laboratory Responsible Engineers and STRs	Base		-	53,447	221,118	182,172	155,490	87,543	18,035	(4,361)	713,444	-	713,444
1310.83TS	Task Support Requests	Base		-	128,911	533,325	439,391	375,035	211,151	43,500	(10,520)	1,720,793	-	1,720,793
1400.8401	SDG Base Contract Pre-FY 2003	Base		(6,585)	278	889	901	1,024	760	684	475	(1,573)	1,573	(0)
1401.8402	Management	Base		6,058,851	180,393	577,847	585,400	665,212	493,840	444,494	308,464	9,314,499	1,022,202	10,336,701
1401.8403	Support Services	Base		7,737,462	130,331	417,483	422,940	480,603	356,790	321,138	222,859	10,089,604	738,521	10,828,126
1401.8404	SDG Travel & Relocation DCS	Base		1,524,397	53,667	171,910	174,157	197,901	146,918	132,237	91,768	2,492,956	304,106	2,797,063
1401.8405	Facility Space, Utilities Supplies & Services	Base		584,903	(0)	(0)	(0)	(0)	(0)	(0)	(0)	584,903	(0)	584,903
1401.8418	Design Reviews	Base		367,292	7,903	25,315	25,646	29,142	21,434	13,513	13,513	509,918	44,791	554,669
1402.8406	Platform Hardware & Maintenance	Base		2,670,564	126,439	405,018	410,312	466,252	346,136	311,549	216,205	4,952,475	716,470	5,668,945
1402.8407	Platform Hardware & Maintenance - Aiken	Base		865,432	88,520	284,834	288,558	327,899	243,425	219,102	152,049	2,470,219	503,868	2,974,087
1402.8408	SDG Procurement Engineering Support	Base		642,996	84,341	270,168	273,699	311,015	230,891	207,820	144,220	2,165,150	477,923	2,643,073
1402.8410	Standards	Base		5,347,558	8,618	27,604	27,965	31,778	23,591	21,234	14,736	5,503,085	48,832	5,551,916
1402.8411	Networks	Base		177,016	16,382	52,475	53,161	60,408	44,846	40,365	28,012	472,664	92,827	565,490
1402.8413	Laboratory Information Management System (LIMS)	Base		291,480	33,528	107,400	108,804	123,638	91,786	82,615	57,332	896,582	189,989	1,086,571
1402.8414	Process PCs	Base		1,373,269	105,187	336,942	341,347	387,885	287,958	259,184	179,865	3,271,638	596,046	3,867,684
1402.8477	PLC & Supervisor for Unit KWG	Base		-	111	356	360	409	304	273	190	2,003	629	2,632
1402.8490	Simulation & Testing	Base		724,804	68,569	219,644	222,515	252,852	187,712	168,955	117,249	1,962,299	388,546	2,350,845
1403.8412	Manufacturing Management Information System (MMIS)	Base		4,108,839	171,129	548,171	555,336	631,049	468,478	421,666	292,622	7,197,291	969,706	8,166,997
1404.8420	PLC's General	Base		4,015,923	95,187	304,908	308,894	351,008	260,581	234,543	162,765	5,733,809	539,378	6,273,187
1404.8421	PLC & Supervisor for Unit DRS/DDP	Base		4,007	11,023	35,308	35,770	40,646	30,175	27,160	18,848	202,936	62,459	265,395
1404.8422	PLC & Supervisor for Unit DCP/DCM	Base		(146)	12,050	38,601	39,105	44,437	32,989	29,693	20,606	217,334	68,284	285,618
1404.8423	PLC & Supervisor for Unit DCE/NTP	Base		43,436	13,323	42,677	43,235	49,130	32,828	22,782	22,782	283,884	75,495	359,379
1404.8424	PLC & Supervisor for Unit NDD	Base		270,080	7,122	22,815	23,113	26,264	19,498	17,550	12,179	398,620	40,399	438,978
1404.8425	PLC & Supervisor for Unit NDP	Base		472,536	8,861	28,386	28,757	32,677	24,259	21,835	15,153	632,463	50,214	682,677
1404.8426	PLC & Supervisor for Unit NBX/NBY	Base		358,053	5,913	18,941	19,189	21,805	16,188	14,570	10,111	464,769	33,507	498,276
1404.8427	PLC & Supervisor for Unit NDS	Base		401,891	11,272	36,106	36,578	41,565	30,857	27,774	19,274	605,317	63,871	669,188
1404.8428	PLC & Supervisor for Unit NXR	Base		446,321	3,941	12,623	12,788	14,531	10,788	9,710	6,738	517,440	22,330	539,770
1404.8429	PLC & Supervisor for Unit NCR	Base		287,701	7,632	24,449	24,768	28,145	20,894	18,807	13,051	425,448	43,250	468,698
1404.8430	PLC & Supervisor for Unit NTM	Base		629,298	7,321	23,450	23,757	26,996	20,041	18,039	12,518	761,420	41,483	802,903
1404.8431	PLC & Supervisor for Unit NPE/NPF	Base		589,764	17,570	56,281	57,017	64,791	48,099	43,293	30,044	906,859	99,561	1,006,420
1404.8432	PLC & Supervisor for Unit LTP	Base		88,201	9,558	30,617	31,017	35,246	26,166	23,551	16,344	260,701	54,161	314,862
1404.8433	PLC & Supervisor for Unit PFE/PPF	Base		101,603	34,421	110,259	111,700	126,929	94,229	84,814	58,858	722,812	195,046	917,858
1404.8434	PLC & Supervisor for Unit PRE/PRF	Base		370,163	13,314	42,647	43,204	49,095	36,447	32,805	22,766	610,440	75,442	685,882
1404.8435	PLC & Supervisor for Unit PTE/PTF	Base		347,117	9,514	30,476	30,874	35,083	26,045	23,443	16,268	518,819	53,911	572,730

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CB&I AREVA MOX Services, LLC.
MFFF Project Costs - Timephased 2007 Baseline by Cost Account and Claim Category⁽¹⁾

Cost Account	Cost Account Description	Contract	Claim Category	[A] Pre- June 2007	[B] June 2007 - September 2007	[C] FY 2008	[D] FY 2009	[E] FY 2010	[F] FY 2011	[G] FY 2012	[H] October 2012 - April 2013	[I] = A+B+...H Subtotal Through April 2013	[J] ETC	[K] = I+J Total
1404.8436	PLC & Supervisor for Unit PQE	Base		495,159	130	417	423	480	356	321	223	497,508	738	498,246
1404.8437	PLC & Supervisor for Unit PAD	Base		173,942	7,220	23,128	23,430	26,625	19,766	17,791	12,346	304,249	40,913	345,162
1404.8438	PLC & Supervisor for Unit PAR	Base		119,705	6,276	20,104	20,367	23,144	17,181	15,465	10,732	232,974	35,564	268,538
1404.8439	PLC & Supervisor for Unit PSE	Base		192,383	5,128	16,427	16,641	18,910	12,636	8,769	284,933	29,059	313,991	
1404.8440	PLC & Supervisor for Unit PSF	Base		157,340	5,655	18,115	18,351	20,853	15,481	13,934	9,670	259,399	32,044	291,444
1404.8441	PLC & Supervisor for Unit PSI	Base		372,528	6,244	20,000	20,262	23,024	17,093	15,385	10,677	485,213	35,381	520,594
1404.8442	PLC & Supervisor for Unit PSJ	Base		126,782	7,076	22,666	22,962	26,093	19,371	17,435	12,099	254,483	40,095	294,578
1404.8443	PLC & Supervisor for Unit GME/GMF	Base		603,074	18,285	58,573	59,338	67,428	50,057	45,056	31,267	933,079	103,614	1,036,693
1404.8444	PLC & Supervisor for Unit GMK	Base		90,054	10,155	32,528	32,953	37,446	27,799	25,021	17,364	273,318	57,541	330,859
1404.8445	PLC & Supervisor for Unit GDE	Base		48,147	8,609	27,578	27,939	31,748	23,569	21,214	14,722	203,525	48,785	252,310
1404.8446	PLC & Supervisor for Unit SNE	Base		-	12,710	40,712	41,245	46,868	34,794	31,317	21,733	229,378	72,020	301,398
1404.8447	PLC & Supervisor for Unit SEK	Base		27,154	7,869	25,208	25,537	29,019	21,543	19,390	13,456	169,177	44,592	213,769
1404.8448	PLC & Supervisor for Unit SDK	Base		346,318	5,638	18,062	18,298	20,792	15,436	13,893	9,642	448,079	31,951	480,030
1404.8449	PLC & Supervisor for Unit SCE	Base		-	11,835	37,911	38,407	43,643	32,400	29,162	20,238	213,596	67,065	280,661
1404.8450	PLC & Supervisor for Unit SMK/STK	Base		-	11,159	35,744	36,211	41,148	30,547	27,495	19,081	201,384	63,230	264,614
1404.8451	PLC & Supervisor for Unit TGM	Base		-	13,903	44,536	45,118	51,269	38,061	34,258	23,774	250,920	78,784	329,704
1404.8452	PLC & Supervisor for Unit TGV	Base		77,147	12,167	38,974	39,483	44,867	33,308	29,980	20,805	296,731	68,944	365,675
1404.8453	PLC & Supervisor for Unit TAS	Base		-	13,633	43,670	44,241	50,273	37,322	33,592	23,312	246,044	77,252	323,296
1404.8454	PLC & Supervisor for Unit TCK	Base		-	9,792	31,368	31,778	36,110	26,807	24,129	16,745	176,728	55,489	232,217
1404.8455	PLC & Supervisor for Unit TCP	Base		45,571	10,439	33,438	33,876	38,494	28,577	25,722	17,850	233,967	59,152	293,119
1404.8456	PLC & Supervisor for Unit TCL/TGJ	Base		-	10,968	35,133	35,592	40,445	30,026	27,025	18,755	197,944	62,150	260,094
1404.8457	PLC & Supervisor for Unit TXE	Base		-	-	-	-	-	-	-	-	-	-	-
1404.8458	PLC & Supervisor for Unit LCT	Base		18,923	9,049	28,987	29,366	33,370	24,773	22,298	15,474	182,242	51,278	233,520
1404.8459	PLC & Supervisor for Unit VDJ	Base		-	12,189	39,043	39,554	44,946	33,367	30,033	20,842	219,973	69,967	289,940
1404.8460	PLC & Supervisor for Unit VDT	Base		-	11,500	36,837	37,318	42,406	31,481	28,336	19,664	207,542	65,163	272,705
1404.8461	PLC & Supervisor for Unit VDR/VDU	Base		-	12,985	41,593	42,137	47,881	35,546	31,994	22,203	234,339	73,577	307,916
1404.8485	PLC & Supervisor for Fire Safety	Base		38,426	3,133	10,036	10,168	11,554	8,577	7,720	5,358	94,973	17,754	112,727
1404.8486	PLC & Supervisor for LGF	Base		48,648	8,429	27,001	27,354	31,084	23,076	20,770	14,414	200,776	47,765	248,541
1404.8487	M&I - PRE/PRE	Base		-	957	3,067	3,107	3,531	2,621	2,359	1,637	17,279	5,425	22,704
1405.8462	PLC & Supervisor for Unit KDD	Base		277,405	14,401	46,131	46,734	53,105	39,424	35,485	24,625	537,310	81,605	618,915
1405.8463	PLC & Supervisor for Unit KDA	Base		485,179	31,311	100,297	101,608	115,461	85,716	77,151	53,540	1,050,262	177,424	1,227,686
1405.8464	PLC & Supervisor for Unit KDB	Base		32,040	13,921	44,592	45,175	51,334	38,110	34,302	23,804	283,278	78,883	362,161
1405.8466	PLC & Supervisor for Unit KPA	Base		340,081	19,492	62,439	63,255	71,879	53,361	48,029	33,331	691,867	110,453	802,321
1405.8467	PLC & Supervisor for Unit KPB	Base		171,867	5,174	16,573	16,789	19,078	14,163	12,748	8,847	265,239	29,317	294,556
1405.8468	PLC & Supervisor for Unit KPC	Base		146,232	12,839	41,128	41,665	47,346	35,149	31,636	21,955	377,950	72,754	450,704
1405.8469	PLC for Unit LFX	Base		-	6,123	19,613	19,869	22,578	16,762	15,087	10,470	110,502	34,695	145,197
1405.8470	PLC & Supervisor for Unit KPG	Base		172,630	12,117	38,813	39,320	44,681	33,170	29,856	20,719	391,306	68,659	459,965
1405.8471	PLC & Supervisor for Unit LLP	Base		61,442	12,641	40,492	41,022	46,614	34,606	31,148	21,615	289,581	71,630	361,211
1405.8472	PLC & Supervisor for Unit KCA	Base		295,824	3,108	9,956	10,086	11,461	8,508	5,315	3,515	351,916	17,812	369,727
1405.8473	PLC & Supervisor for Unit KCB	Base		262,667	8,467	27,123	27,478	31,224	23,180	20,864	14,479	415,481	47,980	463,461
1405.8474	PLC & Supervisor for Unit KCC	Base		240,641	8,417	26,963	27,316	31,040	23,043	20,741	14,393	392,555	47,698	440,253
1405.8475	PLC & Supervisor for Unit KCD	Base		327,413	1,997	6,395	6,479	7,362	5,466	4,920	3,414	363,446	11,313	374,760
1405.8476	PLC & Supervisor for Unit KWD	Base		119,639	7,951	25,469	25,802	29,319	21,766	19,591	13,596	263,132	45,054	308,186
1405.8477	PLC & Supervisor for Unit KWG	Base		207,276	6,477	20,747	21,019	23,884	17,731	15,959	11,075	324,169	36,702	360,871
1405.8478	PLC & Supervisor for Unit KDM	Base		199,316	32,792	105,042	106,415	120,923	89,771	80,801	56,073	791,133	185,817	976,950
1405.8480	PLC & Sup. for Unit KUA/KUB/KUD/KUG/KUH	Base		140,778	32,977	105,633	107,014	121,604	90,277	81,256	56,389	735,928	186,864	922,792
1405.8481	PLC & Supervisor for Ventilation	Base		5,762	68,252	218,629	221,487	251,684	186,845	168,175	116,708	1,237,540	386,751	1,624,291
1405.8482	PLC & Supervisor for Electrical Distribution	Base		129,128	25,513	81,726	82,794	94,082	69,845	62,866	43,627	589,581	144,572	734,153
1405.8483	PLC & Supervisor for Fluids	Base		85,564	44,717	143,240	145,112	164,896	122,416	110,183	76,464	892,591	253,389	1,145,980
1405.8484	PLC & Supervisor for Unit KDR	Base		50,964	14,800	47,407	48,027	54,575	40,515	36,467	25,307	318,063	83,863	401,926
1405.8486	PLC & Supervisor for LGF	Base		-	42,832	137,203	138,997	157,947	117,257	105,540	73,241	773,007	242,711	1,015,728
1405.8496	SPLC Procurement Contract Oversight	Base		-	-	-	-	-	-	-	-	-	-	-
1406.8419	Software Analysis & Translation	Base		2,911,338	0	0	0	0	0	0	0	2,911,338	0	2,911,338
Base Total				\$ 688,059,086	\$ 9,551,208	\$ 33,853,074	\$ 35,700,752	\$ 34,191,128	\$ 25,864,501	\$ 17,638,573	\$ 6,711,733	\$ 851,570,054	\$ 20,496,225	\$ 872,066,279
MFFF Project Total				\$ 811,333,382	\$ 35,385,519	\$ 144,943,199	\$ 179,267,024	\$ 236,042,799	\$ 292,278,758	\$ 333,359,142	\$ 176,758,364	\$ 2,209,368,186	\$ 1,441,520,572	\$ 3,650,888,759

Sources:

[A] May 2007 PRISM data

[B-H], [J] See footnote 1.

[I] Calculated

[K] Calculated; May 2007 PRISM data adjusted for budget transfers between July 2007 and September 2012

Notes:

(1) For purposes of estimating incurred cost growth in this Claim, the 2007 Baseline to-go costs of \$2,839,555,376 as of June 2007 were timephased based on the 2012 Rebaseline spend by Management Area (see Schedules 7.3, 7.4 and 7.5).

CB&I AREVA MOX Services, LLC.
Timephased 2007 Baseline Calculation

		[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I] = A+...H
		Timephasing Percentages By Period								
Management		June 2007 -						October 2012 -		
Area		September 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	April 2013	ETC	Total
01		5.51%	15.63%	19.87%	14.63%	15.85%	14.58%	4.21%	9.72%	100.00%
06		2.70%	8.68%	8.18%	8.28%	7.55%	9.02%	5.36%	50.23%	100.00%
10		1.41%	4.39%	6.15%	11.32%	14.28%	14.86%	7.49%	40.09%	100.00%
11		3.01%	11.74%	9.06%	7.58%	7.90%	8.27%	4.35%	48.09%	100.00%
12		3.50%	13.14%	18.66%	22.42%	16.90%	11.22%	3.74%	10.42%	100.00%
13		7.49%	30.99%	25.53%	21.79%	12.27%	2.53%	-0.61%	0.00%	100.00%
14		4.22%	13.51%	13.68%	15.55%	11.54%	10.39%	7.21%	23.90%	100.00%
15		1.43%	4.81%	5.42%	6.01%	6.47%	10.51%	6.51%	58.83%	100.00%
16		0.94%	24.44%	9.74%	13.52%	13.67%	12.32%	5.20%	20.18%	100.00%
17		0.49%	2.52%	5.17%	9.05%	11.74%	16.80%	7.90%	46.32%	100.00%
18		4.58%	7.87%	4.66%	5.75%	7.95%	14.49%	8.25%	46.45%	100.00%
19		0.00%	0.00%	7.29%	9.86%	10.75%	13.28%	6.47%	52.35%	100.00%
20		0.26%	1.50%	1.99%	1.80%	2.51%	2.79%	5.21%	83.94%	100.00%
21		0.14%	0.90%	0.56%	1.40%	12.88%	1.37%	2.76%	79.99%	100.00%
22		0.00%	0.00%	2.17%	5.87%	6.13%	7.49%	4.53%	73.80%	100.00%
90		1.00%	4.84%	8.03%	6.15%	4.21%	4.51%	4.20%	67.07%	100.00%
[J]		[K] = J*A	[L] = J*B	[M] = J*C	[N] = J*D	[O] = J*E	[P] = J*F	[Q] = J*G	[R] = J*H	[S] = K+...R
		2007 Baseline To-Go Costs Timephased								
Management	2007 Baseline To-	June 2007 -						October 2012 -		
Area	Go Costs	September 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	April 2013	ETC	Total
01	\$ 44,260,186	\$ 2,438,415	\$ 6,919,699	\$ 8,794,577	\$ 6,474,149	\$ 7,013,791	\$ 6,452,347	\$ 1,865,065	\$ 4,302,143	\$ 44,260,186
06	192,082,501	5,186,001	16,666,506	15,717,422	15,907,993	14,499,301	17,334,962	10,290,784	96,479,534	192,082,501
10	169,281,760	2,394,882	7,437,856	10,404,430	19,164,565	24,171,649	25,160,499	12,687,551	67,860,329	169,281,760
11	159,416,878	4,805,579	18,713,289	14,441,489	12,080,007	12,595,728	13,181,203	6,940,058	76,659,525	159,416,878
12	44,522,031	1,558,684	5,849,035	8,307,348	9,983,136	7,522,964	4,995,062	1,665,262	4,640,541	44,522,031
13	47,068,605	3,526,074	14,587,963	12,018,606	10,258,285	5,775,573	1,189,846	(287,742)	-	47,068,605
14	47,979,912	2,023,270	6,481,066	6,565,783	7,460,944	5,538,852	4,985,393	3,459,696	11,464,909	47,979,912
15	57,360,041	820,092	2,758,965	3,111,141	3,446,210	3,711,402	6,030,649	3,736,682	33,744,898	57,360,041
16	51,187,385	482,699	12,509,884	4,983,360	6,918,166	6,997,104	6,304,060	2,661,933	10,330,178	51,187,385
17	1,284,785,719	6,357,064	32,409,955	66,393,858	116,323,206	150,855,680	215,823,018	101,525,820	595,097,119	1,284,785,719
18	58,347,594	2,673,306	4,594,065	2,720,970	3,353,437	4,638,632	8,452,332	4,813,744	27,101,108	58,347,594
19	23,023,054	-	-	1,678,607	2,270,625	2,475,183	3,057,505	1,488,989	12,052,145	23,023,054
20	154,845,239	402,373	2,318,769	3,077,756	2,788,163	3,892,582	4,313,981	8,067,075	129,984,539	154,845,239
21	239,821,522	344,061	2,157,587	1,340,090	3,350,950	30,891,559	3,284,491	6,610,749	191,842,035	239,821,522
22	27,395,271	-	-	595,761	1,607,569	1,679,428	2,053,060	1,240,889	20,218,563	27,395,271
90	238,177,678	2,373,019	11,538,560	19,115,825	14,655,394	10,019,330	10,740,734	9,991,810	159,743,007	238,177,678
Total	\$ 2,839,555,376	\$ 35,385,519	\$ 144,943,199	\$ 179,267,024	\$ 236,042,799	\$ 292,278,758	\$ 333,359,142	\$ 176,758,364	\$ 1,441,520,572	\$ 2,839,555,376 ⁽¹⁾

Sources:

Schedules 7.4 and 7.5

Notes:

(1) As of the 2007 Baseline, \$811,333,382 of costs had already been incurred through May 2007 and \$2,839,555,376 remained in estimated to-go costs from June 2007 forward. For purposes of this analysis, the \$2,839,555,376 is timephased based on the 2012 Rebaseline spend by Management Area (see Schedules 7.4 and 7.5).

CB&I AREVA MOX Services, LLC.
Basis For Timephasing the 2007 Baseline Using the 2012 Rebaseline Spend ⁽¹⁾

Schedule 7.4

	[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]	[I]	[J]	[K]	[L]	[M]	[N]	[O]	[P]	[Q]	[R]	[S]	[T] = B+...S	[U] = A+T
	2012 Rebaseline Costs Over Time																				
Management Area	Pre-June 2007	June 2007 - Sept 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	October 2012 - April 2013	May 2013 - Sept 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	Subtotal	2012 Rebaseline
01	\$ 385,227,675	\$ 5,958,945	\$ 16,910,208	\$ 21,491,992	\$ 15,821,383	\$ 17,140,149	\$ 15,768,103	\$ 4,557,804	\$ 4,434,617	\$ 4,792,496	\$ 281,596	\$ 305,516	\$ 328,721	\$ 321,721	\$ 48,814	\$ -	\$ -	\$ -	\$ -	\$ 108,162,065	\$ 493,389,740
06	106,583,748	15,825,313	50,858,581	47,962,410	48,543,945	44,245,259	52,898,405	31,402,785	24,519,766	57,858,692	58,561,645	54,419,207	49,837,413	42,210,119	7,004,735	-	-	-	-	586,148,275	692,732,023
10	6,286,370	6,286,159	19,523,110	27,309,861	50,303,727	63,446,474	66,042,036	33,302,665	25,621,465	51,152,466	33,820,677	21,389,546	18,107,739	8,065,239	19,964,704	-	-	-	-	444,335,867	454,698,237
11	7,533,149	4,490,443	17,486,127	13,494,459	11,287,836	11,769,738	12,316,819	6,484,950	5,005,367	11,929,037	12,865,919	13,598,942	14,444,702	2,558,849	-	-	-	-	-	148,962,794	156,495,942
12	47,780,125	2,915,463	10,940,415	15,538,603	18,673,106	14,071,441	9,343,089	3,114,813	1,590,766	3,735,735	1,479,954	942,532	930,983	-	-	-	-	-	-	83,276,901	131,057,026
13	116,397,373	4,979,103	20,599,387	16,971,247	14,485,530	8,155,577	1,680,158	(406,316)	-	-	-	-	-	-	-	-	-	-	-	66,464,687	182,862,060
14	50,538,719	3,971,630	12,722,172	12,888,469	14,645,647	10,872,630	9,786,203	6,791,297	4,815,974	8,963,984	5,475,226	2,955,463	294,683	-	-	-	-	-	-	94,183,378	144,722,097
15	4,154,454	2,950,780	9,927,064	11,194,232	12,399,847	13,354,039	21,698,947	13,444,999	11,809,920	28,873,521	28,551,082	30,957,657	21,225,716	-	-	-	-	-	-	206,387,804	210,542,258
16	876,442	688,478	17,842,956	7,107,810	9,867,439	9,980,030	8,991,536	3,796,738	3,262,677	6,888,634	4,582,711	-	-	-	-	-	-	-	-	73,009,008	73,885,450
17	44,148,438	12,876,563	65,648,046	134,484,207	235,618,693	305,566,011	437,160,726	205,645,818	163,637,231	304,136,464	347,297,506	265,971,354	124,349,446	1,413	1,413	1,413	1,413	1,440	1,013	2,602,400,171	2,646,548,609
18	9,420,211	8,569,460	14,726,583	8,722,252	10,749,666	14,869,444	27,094,515	15,430,777	10,670,776	24,957,520	23,821,579	18,194,879	9,229,656	-	-	-	-	-	-	187,037,107	196,457,318
19	-	-	-	-	12,103,757	16,372,563	17,847,543	22,046,431	10,736,497	8,405,968	20,252,881	19,971,808	17,613,387	12,898,579	6,837,516	923,015	-	-	-	166,009,946	166,009,946
20	870,980	561,747	3,237,202	4,296,814	3,892,518	5,434,382	6,022,691	11,262,336	3,209,648	15,821,984	20,369,076	26,743,553	55,001,994	54,532,789	5,790,175	459	-	-	-	216,177,369	217,048,349
21	1,175,208	386,846	2,425,890	1,506,735	3,767,652	34,733,028	3,692,928	7,432,818	7,769,327	26,447,567	36,036,618	52,869,633	47,077,248	38,221,898	7,275,948	-	-	-	-	269,644,137	270,819,345
22	-	-	-	-	1,188,683	3,207,478	3,350,853	4,096,338	2,475,865	1,884,896	5,554,476	5,814,399	6,220,882	7,617,409	11,282,167	1,966,550	-	-	-	54,659,996	54,659,996
90	26,264,492	2,096,184	10,192,479	16,885,786	12,945,706	8,850,482	9,487,727	8,826,172	4,315,232	20,328,526	18,145,929	18,718,268	23,498,934	44,020,083	12,080,524	-	-	-	-	210,392,032	236,656,524
Total	\$ 811,333,382	\$ 72,557,114	\$ 273,040,220	\$ 353,147,317	\$ 482,582,736	\$ 583,687,078	\$ 708,126,652	\$ 364,300,019	\$ 280,953,631	\$ 590,713,480	\$ 616,419,916	\$ 530,167,795	\$ 383,997,463	\$ 219,937,648	\$ 57,614,728	\$ 1,872	\$ 1,413	\$ 1,440	\$ 1,013	\$ 5,517,251,535	\$ 6,328,584,918

Calculated As:	B/T	C/T	D/T	E/T	F/T	G/T	H/T	I/T	J/T	K/T	L/T	M/T	N/T	O/T	P/T	Q/T	R/T	S/T	
	Timephasing Percentages By Period																		
Management Area	June 2007 - Sept 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	October 2012 - April 2013	May 2013 - Sept 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	Total
01	5.51%	15.63%	19.87%	14.63%	15.85%	14.58%	4.21%	4.10%	4.43%	0.26%	0.28%	0.30%	0.30%	0.05%	0.00%	0.00%	0.00%	0.00%	100.00%
06	2.70%	8.68%	8.18%	8.28%	7.55%	9.02%	5.36%	4.18%	9.87%	9.99%	9.28%	8.50%	7.20%	1.20%	0.00%	0.00%	0.00%	0.00%	100.00%
10	1.41%	4.39%	6.15%	11.32%	14.28%	14.86%	7.49%	5.77%	11.51%	7.61%	4.81%	4.08%	1.82%	4.49%	0.00%	0.00%	0.00%	0.00%	100.00%
11	3.01%	11.74%	9.06%	7.58%	7.90%	8.27%	4.35%	3.36%	7.54%	8.01%	8.64%	9.13%	9.70%	1.72%	0.00%	0.00%	0.00%	0.00%	100.00%
12	3.50%	13.14%	18.66%	22.42%	16.90%	11.22%	3.74%	1.91%	4.49%	1.78%	1.13%	1.12%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
13	7.49%	30.99%	25.53%	21.79%	12.27%	2.53%	-0.61%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
14	4.22%	13.51%	13.68%	15.55%	11.54%	10.39%	7.21%	5.11%	9.52%	5.81%	3.14%	0.31%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
15	1.43%	4.81%	5.42%	6.01%	6.47%	10.51%	6.51%	5.72%	13.99%	13.83%	15.00%	10.28%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
16	0.94%	24.44%	9.74%	13.52%	13.67%	12.32%	5.20%	4.47%	9.44%	6.28%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
17	0.49%	2.52%	5.17%	9.05%	11.74%	16.80%	7.90%	6.29%	11.69%	13.35%	10.22%	4.78%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
18	4.58%	7.87%	4.66%	5.75%	7.95%	14.49%	8.25%	5.71%	13.34%	12.74%	9.73%	4.93%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
19	0.00%	0.00%	7.29%	9.86%	10.75%	13.28%	6.47%	5.06%	12.03%	12.20%	10.61%	7.77%	4.12%	0.56%	0.00%	0.00%	0.00%	0.00%	100.00%
20	0.26%	1.50%	1.99%	1.80%	2.51%	2.79%	5.21%	1.48%	7.32%	9.42%	12.37%	25.44%	25.23%	2.68%	0.00%	0.00%	0.00%	0.00%	100.00%
21	0.14%	0.90%	0.56%	1.40%	12.88%	1.37%	2.76%	2.88%	9.81%	13.36%	19.61%	17.46%	14.17%	2.70%	0.00%	0.00%	0.00%	0.00%	100.00%
22	0.00%	0.00%	2.17%	5.87%	6.13%	7.49%	4.53%	3.45%	10.16%	10.64%	11.38%	13.94%	20.64%	3.60%	0.00%	0.00%	0.00%	0.00%	100.00%
90	1.00%	4.84%	8.03%	6.15%	4.21%	4.51%	4.20%	2.05%	9.66%	8.62%	8.90%	11.17%	20.92%	5.74%	0.00%	0.00%	0.00%	0.00%	100.00%
Total	1.32%	4.95%	6.40%	8.75%	10.58%	12.83%	6.60%	5.09%	10.71%	11.17%	9.61%	6.96%	3.99%	1.04%	0.00%	0.00%	0.00%	0.00%	100.00%

Sources:

2012 contract proposal value as stated in December 2012 PRISM data

Notes:

(1) As of the 2007 Baseline, \$811,333,382 of costs had already been incurred through May 2007. For purposes of timephasing the 2007 Baseline, the 2012 Rebaseline spend by Management Area starting in June 2007 was applied to the \$2,839,555,376 in to-go costs in the 2007 Baseline as of June 2007. This schedule shows the calculation of the 2012 Rebaseline spend by Management Area that is applied to the 2007 Baseline in Schedule 7.3.

CB&I AREVA MOX Services, LLC.
2007 Baseline by Management Area

	[A]	[B]	[C] = A+B
Management Area	Actual Costs Through May 2007	To-Go Costs	Total 2007 Baseline
01	\$ 385,227,675	\$ 44,260,186	\$ 429,487,860
06	106,583,748	192,082,501	298,666,249
10	10,362,370	169,281,760	179,644,130
11	7,533,149	159,416,878	166,950,027
12	47,780,125	44,522,031	92,302,157
13	116,397,373	47,068,605	163,465,978
14	50,538,719	47,979,912	98,518,631
15	4,154,454	57,360,041	61,514,495
16	876,442	51,187,385	52,063,827
17	44,148,438	1,284,785,719	1,328,934,157
18	9,420,211	58,347,594	67,767,805
19	-	23,023,054	23,023,054
20	870,980	154,845,239	155,716,219
21	1,175,208	239,821,522	240,996,730
22	-	27,395,271	27,395,271
90	26,264,492	238,177,678	264,442,170
Total	\$ 811,333,382	\$ 2,839,555,376	\$ 3,650,888,759

Source:

May 2007 PRISM data adjusted for budget transfers between July 2007 and September 2012.

EXHIBIT D



Department of Energy
National Nuclear Security Administration
MOX Project Management Office
Savannah River Site
P.O. Box A
Aiken, South Carolina 29802



August 22, 2017

Mr. Rex Norton
Vice President, Contracts and Supply Chain Management
CB&I AREVA MOX Services, LLC
Savannah River Site
P.O. Box 7097
Aiken, SC 29804-7097

SUBJECT: Contract DE-AC02-99CH10888, MOX Fuel Fabrication Facility Project,
Certified Claim for Fee on Incurred Costs, C 17-001

REFERENCE: (1) MOX Services letter DCS-DOE-005690, dated June 22, 2017,
including attachment C 17-001 Fee on Incurred Costs, dated June 22,
2017
(2) MOX Services letter DCS-DOE-005426, dated September 29, 2016
(3) NNSA letter NA-APM-17-0012, dated December 7, 2016

Dear Mr. Norton:

The National Nuclear Security Administration (NNSA) received the contractor's claim at Reference (1), which was dated June 22, 2017. After review, NNSA has determined the claim is based on the same set of operative facts as MOX Services' claim 16-003 at Reference (2) submitted on September 29, 2016, which NNSA denied on December 7, 2016 via the Contracting Officer's Final Decision at Reference (3). As such, claim 17-001 is the same as claim 16-003, albeit with an increase in the amount of claimed cost/fee, and an additional legal theory that the alleged contract changes also require an upward adjustment to the fixed fee.

The Court of Federal Claims has held that an increase in the claimed amount alone does not make a claim a new claim if it continues to be based on the same operative facts as the original claim. AAB Joint Venture v. United States, 68 Fed. Cl. 363, 365–66 (2005). The court also explained that:

[t]he same set of operative facts has been found where the contractor submits additional evidence pertaining to damages to support the same factual claim or where the claim merely 'augments the legal theories' underlying the certified claim. In contrast, the same set of operative facts has not been found where the contractor files a different type of claim from that presented to the contracting officer.

R. Norton

2

August 22, 2017

Further, as the amount of claim 17-001 essentially reconciles MOX Services' actual cost overrun¹ through April 30, 2013, to the estimated contract value, MOX Services' 17-001 claim in effect requests a cost-plus-percentage-of-cost contract, which is prohibited by 41 U.S.C. 3905(a).

Accordingly, NNSA considers claim 17-001 to be the same as claim 16-003, which NNSA denied on December 7, 2016 via the Contracting Officer's Final Decision at Reference (3). The Contracting Officer's Final Decision at Reference (3) continues to apply and will not be reconsidered.

If you have any questions, please call the undersigned at 803-952-2020.

Sincerely,



Lance Nyman
Lead Administrative Contracting Officer

NA-APM-17-0263

cc:

S. Cannon, NA-APM-1.4
S. Hamlett, NA-APM-1.4
A. Rischbieter, NA-APM-1.4
D. Del Vecchio, MOX Services
G. Rousseau, MOX Services
P. Whittingham, MOX Services
K. Saunders, MOX Services
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MOXPMODCA@srs.gov

¹ With a few limited exceptions, see DCS-DOE-005690.

EXHIBIT E



REA 15-001

Cost/Schedule Incentive Fee Payment

Contract DE-AC02-99CH10888

14 May 15

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~~May be exempt from public release under the Freedom of Information Act (5 U.S.C. 552),
exemption number and category: Exemption 4 - Commercial/Proprietary~~

~~Department of Energy review required before public release.~~

~~Name/Org: Rex Norton /Vice President
Contracts & Supply Change Management~~

~~Date: 11 May 15~~

~~Guidance (if applicable): N/A~~

**DOES NOT CONTAIN OFFICIAL USE ONLY
INFORMATION**

Name/Org: S.Townsend/MOX Services Date: 02Nov17

REA 15-001
Cost/Schedule Incentive Fee Payment
Contract DE-AC02-99CH10888
25 June 15

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I. EXECUTIVE SUMMARY

CB&I AREVA MOX Services, LLC (“MOX Services”)¹ submits this Request for Equitable Adjustment (“REA”) under Option 1 of contract DE-AC02-99CH10888 (the “Contract”) for the construction of the Mixed Oxide (“MOX”) Fuel Fabrication Facility (“MFFF”).

In January 2012, the National Nuclear Security Administration (“NNSA”) directed MOX Services to prepare a rebaseline proposal for the MFFF project (the “Project”). MOX Services submitted a Baseline Change Proposal (“BCP”) in September 2012 and an October 2012 MOX Project Rebaseline Proposal (collectively the “2012 Rebaseline”), both of which contained the same costs and schedule.²

While NNSA agreed with the basic tenets of the 2012 Rebaseline and has directed MOX Services to use its figures and schedule for reporting purposes, neither NNSA nor the Department of Energy (“DOE”) has acted on the proposal to increase the congressional baseline, estimated Contract cost, or the Total Project Cost (“TPC”). Many things have occurred since the 2012 Rebaseline – including funding reductions – that have increased MOX Services’ cost and schedule beyond the 2012 Rebaseline. Thus, a new Contract rebaseline must be established – and *definitized* – to complete the Project. MOX Services looks forward to receiving a new complete funding profile and working with NNSA to rebaseline the Project.

While MOX Services awaits this Project rebaseline, it seeks through this REA immediate payment of incentive fee due and owing to MOX Services. The Contract entitles MOX Services to incentive fee payments for every quarter in which it is “projected to be below the total estimated Cost of CLIN 002, and schedule.”³ In 2011, a dispute arose between MOX Services and NNSA as to the Cost at Completion against which MOX Services’ performance would be measured. Beginning in the first quarter of Fiscal Year 2011, NNSA suspended incentive fee payments to MOX Services, and NNSA has refused to resume them.

In connection with the 2012 Rebaseline, both the estimated cost of CLIN 0002 and the Project schedule were adjusted for reporting purposes, removing any doubt that MOX Services was projected to be below the estimated cost of CLIN 0002 and the Project schedule. Since that time, NNSA has reduced funding and failed to provide a funding profile

¹ A list of defined terms and acronyms is at Section VII of this REA.

² Where distinctions between Baseline Change Proposal 12-121 (“BCP 12-121”) and the October 2012 Rebaseline Proposal are important, this REA will cite to the specific document as appropriate. Otherwise these documents will be referred to collectively as the “2012 Rebaseline.”

³ Contract (“Exhibit 1”) at J.7.2.

to Project completion, making further Estimate At Completion (“EAC”) comparisons impossible. **Thus, MOX Services is entitled to and seeks all suspended incentive fee payments, which total \$50,390,019 through the second quarter of FY15.** Although the incentive fee suspension may be lifted and payments made without a modification to the Contract, if NNSA believes Contract modifications to the estimated cost of CLIN 0002 and Project schedule are necessary, then MOX Services requests that they be modified to allow payment of incentive fee.

This REA documents Contract changes and out-of-scope work that have increased cost and extended the Project schedule. Making the required adjustments to costs and schedule brings MOX Services within the Cost Incentive Fee Band, entitling MOX Services to the contractual Incentive Fee. Examples of the changes include: (i) the basis and assumptions on which MOX Services estimated the cost and schedule to procure, fabricate and assemble the process units; (ii) the basis on which MOX Services estimated the costs to construct the MFFF; and (iii) the method of construction performance (originally the Contract directed MOX Services to act only as a construction manager performing all construction work through competitively bid fixed-price subcontracts).

NNSA is responsible for these Contract changes, increased costs, and extended Project schedule.⁴ The increased costs for which NNSA is responsible include \$2,507,993,356, which consist of costs MOX Services incurred due to changes in process unit scope (\$1,262,771,618), construction strategy (\$252,204,423), and commodities (\$993,017,315). For this REA, MOX Services has removed \$252,071,756 of its added costs, which include the following items: Process Unit Omitted Scope (\$30.5M), Engineering Cost REA (\$35.8M), Selected Contract Modifications (\$50.9M), and EAC Scrubs (\$134.9M).

MOX Services’ increased costs include both incurred costs and costs on future work as reported. In the Project rebaseline, MOX Services can provide an updated estimate of the incurred costs to date, if requested.

A. Introduction

DOE and NNSA have strictly controlled the timing, performance and funding of the Project from the time the Contract was signed in 1999. The MFFF Project resulted from the Plutonium Management and Disposition Agreement (“PMDA”) between the United States and Russia in which each country agreed to dispose of significant amounts of weapons-grade plutonium. Rather than directing the Project in the most efficient and cost effective manner, DOE has on many occasions based its Contract direction on political considerations that have increased the Project’s cost and schedule.

⁴ In seeking past due and owing incentive fee payments in this REA, MOX Services reserves, and does not waive, its right to seek any other payments from the government to which MOX Services is entitled in law and equity.

The Project has been politically charged from the beginning. Internationally, the PMDA calls for the Russian and American plutonium disposition programs to proceed roughly in parallel. On multiple occasions, DOE has slowed down the Project so as not to get ahead of the Russian program. For example, until certain aspects of the Russian implementation of the PMDA were settled in the mid-2000s, DOE severely limited MOX Services' access to, and information allowed to be shared with, potential process unit subcontractors in order not to give the impression that the programs were no longer tied to one another.

On the domestic political front, the State of South Carolina only agreed to accept weapons-grade plutonium at the Savannah River Site ("SRS") on the condition that the government promise to implement a strategy for removing it, preferably through the construction of the MFFF, that would create thousands of jobs in the State. By the time a major delay in the Russian MOX program was resolved, the plutonium had been stored at the SRS for years, and, from South Carolina's perspective, DOE had not held up its end of the bargain. Even though at that point the relevant designs were not sufficiently mature to support accurate cost estimates, in response to pressure from the State's political leaders, DOE directed MOX Services to prepare the estimates on which MOX Services' fee would be negotiated.

More recently, NNSA has drastically cut Project funding. These decisions, among others, have all severely impacted Project cost and schedule.

Before exercising Option 1, DOE recognized that these largely political risks (*e.g.*, parallelism with the Russian program and funding) were real and could significantly impact Project cost and schedule. Moreover, these risks were completely outside MOX Services' control. Because the potential impact of these risks was so great and the likelihood of their realization was unknowable, instead of including these risks in Project cost estimates, DOE decided to accept these risks and exclude them from the scope of the Contract. DOE's decisions related to parallelism with the Russian program, funding, and other risks assumed by the government have severely impacted the Project.

Instead of allowing MOX Services to select the construction performance strategy it judged best, and in an effort to save money, NNSA decided to direct the construction performance strategy. Specifically, it directed MOX Services to subcontract all the construction work on a competitive fixed-price basis. NNSA surmised that competition would drive down subcontractors' bids and that the fixed-price nature of the subcontracts would control potential cost overruns. NNSA's strategy failed due to a lack of qualified and willing subcontractors, and so had to be abandoned. Modification 152 recognized a formal change in strategy. NNSA's failed strategy has increased costs significantly.

This REA documents the government direction and changes in scope which have increased Project complexity, cost and schedule, and which entitle MOX Services to an equitable adjustment in incentive cost and schedule targets. The major sections of this REA are as follows:

- I. Executive Summary
- II. Contract Background
- III. Process Unit Changes
- IV. Change in the Method of Construction Performance
- V. Increased Facility Construction Costs
- VI. Incentive Fee Payments

Cost and schedule growth exist that are not part of this REA. For example, this REA only deals with Option 1 and does not include any changes under the Base Contract. Award fee changes are also not included in this REA. MOX Services reserves its rights to seek any additional adjustments for these and other matters not included in this REA. To the extent that this REA overlaps with other outstanding REAs or Baseline Change Proposals on which NNSA has failed to act, this REA shall take precedence.

B. Change In Scope Associated With Process Unit Procurement

The PMDA requires the Project to proceed in rough parallel with the Russian MOX Program. Because risks associated with the requirement for parallelism with the Russian Program were beyond MOX Services' control, such risks were accepted by NNSA, and were explicitly placed beyond the scope of the Contract.

Beginning in 2003, MOX Services repeatedly requested authorization to conduct pilot procurements and establish Basic Ordering Agreements ("BOAs") with vendors to validate certain key assumptions surrounding the process units, including the constructability of the French reference plant designs; the existence and interest of capable manufacturers to design, fabricate and test the process units; and the likely costs and schedule of the procurements. At every turn, DOE refused to allow MOX Services to conduct procurement activities or actions because the Russian MOX program was stalled.

Because NNSA did not allow MOX Services to conduct any procurement activities before providing its estimate of process unit costs and schedule in the Option 1 proposal, MOX Services was not able to validate its assumptions prior to doing so. MOX Services was forced to estimate process unit costs and schedule using traditional, limited estimating methodologies, which proved unsuitable for the effort. As a result, the discrete costs associated with manufacturing the units, such as fabrication and assembly costs, were substantially underestimated.

Moreover, from the time of the Critical Decision 2 performance baseline ("2007 Baseline") until the 2012 Rebaseline, delays in the process unit procurement cycle controlled the Project's critical path. By the 2012 Rebaseline, the process units were delayed 1,175 calendar days, pushing back the estimated completion of Option 1 substantially.

Accordingly, the Project's hotel load costs, which were impacted by the delays, were also substantially underestimated.

The process unit cost and schedule underestimates were a direct result of the DOE's refusal to authorize MOX Services to engage potential vendors and to conduct pilot procurements prior to the start of Option 1. DOE based its refusal on the necessity of maintaining parallelism with the Russian MOX program – a risk NNSA explicitly accepted. Therefore, the government is responsible for the increased costs incurred by MOX Services and caused by NNSA's refusal to authorize pilot procurements. As a result, MOX Services is entitled to an adjustment of the fee bands; its performance has fallen within the adjusted bands and has earned incentive fee. These additional costs, estimated as of the 2012 Rebaseline proposal, were \$1,262,771,618. In Section III of this REA, MOX Services explains the factual and legal basis for its entitlement to increased process unit costs.

C. Change In Construction Strategy

NNSA's original construction performance strategy directed MOX Services to serve as the construction manager and to perform the work through fixed-price, competitively bid subcontracts. In fact, the Contract prohibited MOX Services from self-performing any construction. In controlling and directing the construction performance strategy, NNSA accepted the risk that its strategy might fail. Correspondingly, MOX Services expressly excluded this risk from its Option 1 proposal, and it included in its cost estimate a key assumption – that a sufficient number of qualified subcontractors would be willing and able to undertake Project construction on a fixed-price basis.

Ultimately, NNSA's construction performance strategy could not be executed without cost increases and unacceptable quality control risks. Given the risks of this first-of-a-kind construction Project under a licensing process strictly regulated by the Nuclear Regulatory Commission ("NRC"), few construction subcontractors were willing to bid for the work on a fixed-price basis, and most were not qualified to undertake it. As a result, NNSA issued Modification 152 to change the method of construction performance. The modification removed the Contract's prohibition on self-performing construction work and the requirement to subcontract all construction work on a competitive, fixed-price basis. As of the 2012 Rebaseline, MOX Services expected to self-perform significant construction scope, including, among other things, piping and electrical work. In short, Modification 152 acknowledged that NNSA's original strategy had proven unworkable.

As a result of NNSA's failed construction performance strategy and subsequent change thereto, the government is responsible for MOX Services' \$252,204,423 in estimated cost growth as of the 2012 Rebaseline, requiring adjustment of the fee bands, under which MOX Services will then have earned incentive fee. As explained in Section IV, these increased costs are associated with (i) increased construction management scope and (ii) increased Quality Assurance / Quality Control ("QA/QC") resources necessary to provide support to vendors.

D. Increased Facility Construction Costs

Due to external international and domestic political pressures, NNSA required MOX Services to create and submit its Option 1 cost estimates before the designs were sufficiently mature to support the preparation of accurate estimates. At the time of the estimates, NNSA knew that much of the design was too immature to provide a basis for accurate estimates.

NNSA's rush to have estimates in hand stemmed from political pressure exerted by South Carolina's elected officials. Years before, South Carolina had agreed to accept weapons-grade plutonium at the Savannah River Site on the condition that the federal government implement a disposition strategy for it, preferably involving construction of the MFFF. While an impasse over Russia's implementation of the PMDA stalled the U.S. MOX Project, DOE directed MOX Services to focus on achieving a design licensable by the NRC, with only token regard for constructability or the design's sufficiency to allow accurate estimates. When the U.S.-Russian impasse was broken, South Carolina's elected officials leveraged the long delay to compel DOE immediately to begin the construction contracting process and break ground on the MFFF regardless of whether MOX Services was in a position to reasonably estimate the costs.

Constructing the first-of-a-kind, highly complex MFFF proved even more resource-intensive than anyone anticipated. As the facility and process unit designs advanced, it became clear that the Option 1 estimates for bulk commodities, mechanical equipment and materials and associated craft labor were far too low, as were the associated Title III engineering costs.

As of the 2012 Rebaseline, MOX Services estimated that the Project would experience over \$993 million in facility construction related cost growth over the 2007 Baseline estimates. Section V of this REA further explains these increased costs.

E. Incentive Fee Payments

As a result of required adjustments in CLIN 0002 cost and Project schedule, MOX Services is entitled to and seeks the immediate payment of \$50,390,019 in suspended incentive fee. MOX Services has used the 7% incentive fee schedule which is based on early Option 2 exercise.⁵ MOX Services has submitted its Option 2 proposal, but NNSA has failed to act on it. MOX Services should not be penalized for NNSA's failure to act.

MOX Services is entitled to incentive fee payments for every quarter in which the Project EAC is less than the estimated combined value of CLIN 0002 and the applicable Incentive Fee Band amount. As of October 2012, the estimated cost of CLIN 0002 was known and should have been increased consistent with the then-current EAC (the 2012

⁵ Letter DCS-DOE-004862 from Paul Whittingham, Contracts Manager, CB&I AREVA MOX Services, LLC, to Carol Elliot, Contracting Officer, NNSA (Apr. 1, 2015) (Request to Increase Fee Percentage from 6.75% to 7.00%) ("April 1, 2015 Letter") ("Exhibit 2").

Rebaseline). In connection with the 2012 Rebaseline, the estimated cost of CLIN 0002 should have been set at the Project EAC plus any remaining Management Reserve, or \$6,352,406,548, through the normal contract administration process. Thus, as of the 2012 Rebaseline, the EAC was below the combined CLIN 0002 cost and Incentive Fee Band. Accordingly, MOX Services was eligible to receive all suspended incentive fee payments that had accrued to that date,⁶ and was entitled to continue receiving quarterly incentive fee payments so long as the EAC remained within the Incentive Fee Band.⁷

MOX Services is within the Schedule Incentive Fee Band because construction has not exceeded the allowed schedule and the projected schedule does not exceed the allowed schedule when required adjustments to that date are made. The Project schedule and the Period of Performance must be adjusted due to changes associated with equipment procurements and other risks assumed by the government. With these adjustments, MOX Services is entitled to receive incentive fee payments under the Schedule Incentive Fee Band. Therefore, as further explained in Section VI of this REA, MOX Services requests \$50,390,019 in incentive fee payments now due.

F. Estimate At Completion (EAC) Used In REA

NNSA's reductions in Project funding and elimination of any funding profile for future years have left the Project in limbo, making it impossible to effectively and efficiently plan the work or estimate cost and schedule at completion. The Project currently stands without a schedule to completion or EAC against which to measure cost and schedule impacts. Thus, this REA uses the last full EAC used for reporting in the Earned Value Management System ("EVMS") and contained in MOX Services' 2012 Rebaseline Proposal to measure impacts at that point in time.

The October 2012 Rebaseline Proposal updated the cost and schedule projections based on the NNSA-specified funding profile. MOX Services estimated a new completion date of November 30, 2018, excluding contingency. A corresponding schedule was also completed to support the 2018 Project completion date. The estimated cost for CLIN 0002 was increased to \$6,352,406,548. This amount included \$6,014,144,702 in estimated costs and \$311,261,846 in Management Reserve.⁸ The cost estimate was based on actual costs incurred through May 2012 and an estimate of costs to be incurred through FY18. As

⁶ Contract, Exhibit 1, at J.7.2 ("When the target cost and schedule are once again within the Incentive Fee Band, payments of quarterly Incentive Fee will resume. Additionally, all suspended quarterly payments may be invoiced."). *See also* Chart VI.2 in Section VI of this REA (showing incentive fee payments outstanding).

⁷ *Id.*

⁸ The December 2012 PRISM EAC of \$6.328 billion includes the \$6.041 billion for costs for CLIN 0002 and an additional \$287 million for costs not on Contract (*e.g.*, Management Area 90 costs). Management Reserve is not included in the PRISM EAC.

directed by NNSA, MOX Services utilized the 2012 Rebaseline to report status in Monthly Status Reports and EVMS.

This REA utilizes the 2012 Rebaseline Proposal to define scope changes and measure corresponding cost increases and schedule delay for the sections of the REA related to changes. It measures the impacts to cost and schedule by comparing the 2007 Baseline to the 2012 Rebaseline for Option 1 work scope. Measuring impacts through the 2012 Rebaseline is reasonable and proper because it reflects the last comprehensive, bottom-up EAC reflecting a full funding profile through Project completion. Some adjustments to the EAC have been made since the 2012 Rebaseline EAC, but these adjustments have not been comprehensive in estimating the changes to both schedule and cost.⁹

MOX Services and NNSA agreed in July 2007 to a TPC of \$4.814 billion.¹⁰ The TPC included a Baseline cost estimate of \$3.650 billion based on actual costs incurred through FY06 and estimated costs through the completion of the Project in FY14.¹¹ MOX Services used the 2007 Baseline to measure its performance, and the 2007 Baseline was included in its monthly performance reports. The 2007 Baseline was reflected in the Project Execution Plan (“PEP”) and, as used in this REA, was adjusted for the budget allocation request that reallocated original budget between different cost accounts. The 2007 Baseline also reflects the reductions that MOX Services made to their internal estimates. These reductions are referred to as EAC “scrubs” in MOX’s 2008 Management Reserve Recalculation.¹²

Subsequent to the Option 1 definitization, MOX Services and NNSA agreed to a Management Reserve of \$316.5 million in cost. MOX Services allocated this Management Reserve to cost growth and changes recognized between 2007 and 2012. For purposes of this REA, any allocation of Management Reserve has been eliminated or removed from the calculation of cost growth.¹³

⁹ Many of these cost changes are referred to by MOX Services as the addendum to the 2012 Rebaseline.

¹⁰ Letter DCS-DOE-002834 from Dave Stinson, President and Project Manager, Shaw AREVA MOX Services, to Clay Ramsey, MFFF Federal Project Director, NNSA (July 20, 2007) (“Exhibit 3”).

¹¹ The cost estimate of \$3.650 billion equals the TPC less Management Reserve, contingency, and fee.

¹² REA 08-008 Option 1 Proposal Management Reserve Recalculation. For purposes of this REA, the EAC “scrubs” are reflected as a bottom line adjustment.

¹³ The May 2012 Monthly Report indicated that the remaining Management Reserve was less than \$1 million.

II. CONTRACT BACKGROUND

Concerned with the growing threat of nuclear proliferation after the Cold War, the United States and Russia agreed in the early 1990s to reduce their stockpiles of weapons-grade plutonium. In 2000, the countries formalized this agreement in the PMDA, in which each nation agreed to dispose of no less than 34 metric tons of plutonium.¹ To the extent practicable, the Russian and American plutonium disposition programs were to proceed in parallel.²

As the United States was negotiating the PMDA, it also analyzed various disposition methods for its surplus plutonium, ultimately deciding to build a first-of-a-kind mixed oxide fuel fabrication facility at the Savannah River Site in South Carolina. The Project would be designed to mix the surplus plutonium with depleted uranium oxide to form mixed oxide fuel, which may be used to generate nuclear power.

Although the Project would be based on then 20-year old MOX technology developed in France and used at the MELOX and La Hague plants, it has many unique features that increase its complexity. Among other things, the Project would start with weapons-grade plutonium, not spent fuel as do the French reference plants; it would combine the separate aqueous processing and MOX fuel fabrication processes into one plant; and it would be subject to U.S. quality, safety and security standards and regulations, including regulation and licensing by the NRC.

In March 1999, DOE awarded the Contract for the U.S. MFFF to the predecessor in interest to MOX Services. The Contract was awarded on a cost-reimbursement basis and was structured as a base contract with a series of options. The base contract covered the design of the Project, and Option 1 was for the construction and cold start-up of the facility. This REA deals only with Option 1.

A. MOX Services' CLIN 0002 Option 1 Proposal

In March 2006, MOX Services submitted its Option 1 Proposal. It proposed to start construction in September 2006, to complete construction in July 2012, and to complete cold start-up in August 2013. A year later, in April 2007, DOE approved the Critical Decision 2, performance baseline, and Critical Decision 3, the start of construction (collectively, CD

¹ Agreement Between the Government of the United States of America and the Government of the Russian Federation Concerning the Management and Disposition of Plutonium Designated as No Longer Required for Defense Purposes and Related Cooperation (2000) ("PMDA"), art. II, ¶ 1 ("Exhibit 4").

² *Id.* at art. II, ¶ 3.

2/3). DOE authorized MOX Services to begin construction on August 1, 2007. Critical Decision 2/3 set a TPC of \$4.8 billion, and it scheduled completion for September 2016.³

In May 2008, the Option 1 Contract was definitized in the amount of \$2,677,801,149,⁴ of which \$2,526,227,501 was estimated costs and \$151,573,648 was fee.⁵ The Option 1 Contract also acknowledged that, while the Management Reserve was not yet definitized (a \$150,000,000 placeholder was used), the adjusted TPC would be increased by the amount of the agreed-upon Management Reserve.

Beyond the sheer scale and technical complexity of the Project, the MFFF has been especially challenging politically since well before Option 1. Internationally, Russia was slow to demonstrate its commitment to meeting the PMDA's requirements, and, consequently, DOE exerted a drag on MOX Services' performance. For example, DOE restricted MOX Services' ability to engage with potential process unit vendors to tap their engineering expertise, and DOE refused to allow MOX Services to conduct planned and requested procurement actions, even though MOX Services was not proposing to make any financial commitments.

In the domestic realm, the Project's technical challenges have been exacerbated by trends in the nuclear industry generally. The Three Mile Island incident precipitated a great downturn in domestic nuclear construction, and the industry has begun to rebound in earnest only in the past decade. MOX Services has discovered that potential subcontractors' capabilities to operate under the NRC's regulatory regime has atrophied, and that truly nuclear-project-capable subcontractors now are in high demand and represent only a small percentage of the industry. Moreover, the unprecedented nature of the Project has made potential subcontractors leery of bidding on large fixed-price contracts, the procurement method insisted upon by the NNSA. Combined, these forces have severely hampered MOX Services' ability to construct the Project in the manner envisioned by DOE at the start of Option 1. Many of these forces were identified in the MOX Services proposal, which expressly assumed that these potential challenges would not impact the Project cost or schedule.

³ See Letter NA-07-046 from Clay H. Ramsey, Federal Project Director, NNSA, to Dave Stinson, President and Project Manager, Shaw AREVA MOX Services, LLC (April 24, 2007) ("Exhibit 5").

⁴ This amount does not include \$798,405,507 for the Base Contract or \$77,477,626 for the Early Option 1 (CD 2/3, Site Prep, CP-20). See Contract Modification No. 124 (May 20, 2008) ("Mod 124") at B.2 ("Exhibit 6").

⁵ Under Modification 124, fee was equal to 7% of the estimated costs, with the last percentage point contingent upon the exercise of Option 2.

In sum, completing the construction and cold start-up phase of the Project will take significantly more resources and time than the parties estimated at the beginning of Option 1.

B. 2012 Rebaseline Proposal

By 2012, the Project's estimated cost and schedule to complete had increased substantially. In 2011 and early 2012, MOX Services submitted numerous REAs which detailed many of the issues contained in this REA. However, NNSA did not act on many of these proposals. In January 2012, NNSA directed MOX Services to prepare a rebaseline proposal,⁶ and, in June 2012, NNSA provided a constrained funding profile.⁷ In September 2012, MOX Services submitted BCP 12-121, the precursor to its submission of the 2012 Rebaseline the following month.

The 2012 Rebaseline proposal updated cost and Project schedule projections. MOX Services estimated a new completion date of November 30, 2018, without schedule contingency, and provided a supporting Project schedule. The 2012 Rebaseline proposed increasing the estimated cost of construction, CLIN 0002, to \$6,352,406,548.⁸ This cost estimate was based on actual costs incurred through May 2012 and estimate through completion.

NNSA initially stated that "[t]he overall BCP is of very high quality and meets the requirements."⁹ However, approval of the 2012 Rebaseline ultimately stalled as the Defense Contract Audit Agency ("DCAA") was unable to complete an adequacy review.¹⁰ Subsequent funding reductions ultimately derailed the approval process for the 2012 Rebaseline. Although NNSA never acted upon the Rebaseline proposal, it directed MOX

⁶ See Letter COR-SRSOCABM-1.19.2012-412183, from Robert Swett, Contracting Officer, NNSA, to Paul Whittingham, Contracts Manager, Shaw AREVA MOX Services, LLC (January 19, 2012) ("Exhibit 7").

⁷ See Letter COR-SRSOCABM-6.29.2012-449690, from Carol Elliot, Contracting Officer, NNSA, to Paul Whittingham, Contracts Manager, Shaw AREVA MOX Services, LLC (June 29, 2012) ("June 29, 2012 Letter") ("Exhibit 8").

⁸ Contract Proposal 12-004, MOX Project Rebaseline (Oct. 31, 2012) ("Proposal 12-004") at 6 ("Exhibit 9").

⁹ See Letter NA-12-086, from Kevin Hall, Deputy Federal Project Director, NNSA, to Kelly Trice, President and Project Manager, Shaw AREVA MOX Services, LLC (Sept. 17, 2012) ("Exhibit 10").

¹⁰ See Letter COR-SRSOCABM-3.20.2013-500979 from Carol Elliott, Contracting Officer, NNSA, to Paul Whittingham, Contracts Manager, Shaw AREVA MOX Services, LLC (Mar. 20, 2013) ("Exhibit 11").

Services to report against BCP 12-121 in its Monthly Status Reports and EVMS,¹¹ and MOX Services did so.

C. Contract Summary

This REA covers MOX Services' entitlement to an adjustment to the Incentive Fee Band due to cost increases and delays resulting from changes to the Option 1 portion of the Contract and, based on that adjustment and MOX Services' achieving the adjusted targets, to incentive fees. The following subsections synopsizes the most relevant contract provisions that govern this REA.

1. Fee Structure

The scope of work set after the 2007 Baseline contemplates a total estimated cost of \$3,552,110,634,¹² as provided in CLIN 0002 in Contract Modification 124, dated May 20, 2008.

In addition to a fixed fee amount of \$11,000,000, the Option 1 Contract provides for three separate fee pools: (1) cost/schedule incentive fee; (2) milestone fee; and (3) award fee.¹³

The total fee pool was calculated as a percentage of the total cost of CLIN 0002. The fee was extensively negotiated, and the parties ultimately agreed that the fee would be equal to 7% of the estimated cost, with 1% contingent upon the exercise of Option 2 hot start-up.¹⁴

¹¹ See Letter NA 12-088 from Kevin Hall, Acting Federal Project Director, NNSA, to Kelly Trice, President and CEO, Shaw AREVA MOX Services, LLC (Sept. 24, 2012) ("September 24, 2012 Letter") ("Exhibit 12"). The cost estimate for the 2012 Rebaseline was finalized at \$6,328,584,918 per the December 2012 Monthly Report ("Exhibit 13" at 7) and December 2012 PRISM database.

¹² This amount includes both the cost to perform Option 1 CLIN 0002 and \$150,000,000 in Management Reserve.

¹³ The parties also included a collateral savings/cost share provision which would provide an additional upward or downward adjustment. Since the collateral savings/cost share adjustment is made at the end of performance, it is not relevant at this time and, thus, is not dealt with in this REA. However, an adjustment to the savings/cost share calculation will be needed in conjunction with any re-baseline of the Project.

¹⁴ See E-Mail from Craig Grochmal, to William Winkler, Ron Oakley and others, Subject: Option 1 negotiations-status (Nov. 14, 2007, 5:38PM) ("Exhibit 14").

MOX Services submitted its proposal for early Option 2 on January 26, 2009.¹⁵ NNSA has not acted on that proposal. In recognition of its delays with respect to early Option 2, on September 5, 2011, DOE issued Modification 183, which set the Option 1 fee percentage to 6.75%, which would be increased to 7% upon exercise of the hot start-up option.¹⁶ Since MOX Services should not be penalized for NNSA's failure to act, the early Option 2 exercise requirement should be eliminated. Thus, this REA uses 7% as the calculation of fee under the incentive fee provisions of the Contract.

a. Cost/Schedule Incentive Fees

MOX Services is currently eligible for an incentive fee totaling \$81,990,019 for completion of the Scope of Work within the value of CLIN 0002 and the period of performance established by the Project schedule. The incentive fee is allocated across the Contract period of performance, and, if both cost and Project schedule Estimates At Completion do not exceed the parameters for that Fiscal Year set forth in the Incentive/Milestone Fee Plan, then MOX Services is entitled to incentive fee for that period.

Initially, the incentive fee earned is entirely provisional, and it remains provisional for the first four quarters. If the EAC continues to comply with the parameters set forth in the Incentive/Milestone Fee Plan, then at the end of the fifth quarter, 50% of the provisional fee of the first quarter will become final. If, instead, the EAC exceeds either the cost or Project schedule parameter, all payments of incentive fee will cease, and any provisional fee will remain provisional until the EAC once again falls within the cost and Project schedule parameters.

The incentive fee cost and schedule targets are subject to adjustment under the Changes clause, which requires an adjustment in "other affected terms."¹⁷ Thus, any changes affecting estimated cost and Project schedule described in this REA will require an adjustment to the Contract's incentive fee provisions and incentive fee plan.

¹⁵ Letter DCS-DOE-003189 from G.W. Painter, Contracts Manager, Shaw AREVA MOX Services, LLC, to Carol Elliot, Contracting Officer, NNSA (Jan. 26, 2006) ("Exhibit 15").

¹⁶ Contract, Exhibit 1, at H.20; *see also* April 1, 2015 Letter, Exhibit 2. The incentive fee amounts in Attachment 1 to the Contract describe fee award under two different fee schedules – one in which the fee is 6.75% of the cost, and one in which the fee is 7% of the cost. Contract, Exhibit 1, at Attachment 1.

¹⁷ Contract, Exhibit 15, at I.; FAR 52.243-2(b).

2. Changes Clause

The Contract includes two variations of the Changes clause, FAR 52.243-2, Changes (Cost Reimbursement).¹⁸

For services with supplies furnished, the Changes clause provides that the Contracting Officer may at any time, by written order, make changes within the general scope of the Contract in any one or more of the following: (1) description of services to be performed; (2) time of performance (*i.e.*, hours of the day, days of the week, etc.); (3) place of performance of the services; (4) drawings, designs, or specifications for specialty supplies; (5) method of shipment or packing of supplies; or (6) place of delivery.¹⁹

For construction work, the Contracting Officer may make changes by written order within the general scope of the Contract in the plans and specifications or instructions incorporated in the Contract.²⁰

If any such change causes an increase or decrease in the estimated cost of, or the time required for, performance of any part of the work under the Contract, whether or not changed by the order, or otherwise affects any other terms and conditions of the Contract, the Contracting Officer shall make an equitable adjustment in the: (1) estimated cost, delivery or completion schedule, or both; (2) amount of any fixed fee; and (3) other affected terms, and the Contracting Officer shall modify the Contract accordingly.²¹

Although the Changes clause specifically addresses changes ordered by the Contracting Officer, it also applies to constructive changes.²² Furthermore, the Boards of Contract Appeals have interpreted the Changes clause's reference to "other affected terms" to extend to incentive, award, and milestone fee provisions.²³

¹⁸ Contract, Exhibit 1, at I.5.

¹⁹ FAR 52.243-2 (Alt. II).

²⁰ FAR 52.243-2 (Alt. III).

²¹ FAR 52.243-2(b).

²² See *Northrop Grumman Sys. Corp. Space Sys. Div.*, ASBCA No. 54774, 10-2 B.C.A. ¶ 34517 (July 22, 2010) (recognizing that a constructive change is compensable under the Changes clause "when a contractor performs work beyond the contract requirements, without a formal change order under the Changes clause, due either to an informal order from, or through the fault of, the government") (internal citations omitted).

²³ See *Space Gateway Support, LLC*, ASBCA Nos. 55608, 55658, 13 BCA ¶ 35,232 (Jan. 29, 2013) (recognizing that the Contracting Officer must "make adjustments, if appropriate, in 'affected' contract terms other than 'fixed fee'").

3. Risks Accepted by NNSA

NNSA accepted risks which drove the increased costs incurred by MOX Services and entitling it to an adjustment to the Incentive Fee Band and, based on that adjustment, incentive fees. These risks were explicitly accepted by NNSA through the Project Execution Plan or through NNSA's direction of MOX Services' construction performance strategy.

a. Risk of parallelism with the Russian MOX program

Acknowledging that risks related to the PDMA's Russian parallelism requirement would be "difficult or impossible to quantify, but could have major impacts on the TPC if realized," the Project Execution Plan ("PEP"), which is incorporated into the Option 1 Contract, excluded these risks from the scope of the Option 1 Contract.²⁴ The PEP then states that "NNSA will accept these risks and process a change to the project baseline should they occur."²⁵

Referencing the PEP, the Option 1 Contract defines "outside of the project risk" to include, among others, "[r]isks related to the requirement for rough parallelism with the Russian program."²⁶ If such an "outside of the project risk" occurs, NNSA will seek additional funding and revise the TPC.²⁷

Concerned that progress on the U.S. MFFF would get too far ahead of that on the Russian MFFF, DOE refused MOX Services' repeated requests to conduct pre-Option 1 pilot procurements of select process units. A stated purpose of these requested pilots was to generate cost and schedule information from prospective vendors on which to base the process unit cost and Project schedule estimates.

b. Construction Prohibition and required competitive fixed-price subcontracting

Rather than contract with MOX Services to perform the actual construction work for the Project, NNSA structured Option 1 such that MOX Services would serve in a construction management capacity. Specifically, MOX Services would meet its Option 1 obligations by providing personnel, facilities, equipment, materials, and supplies necessary to

²⁴ MOX Fuel Fabrication Facility, Project Execution Plan, 99-D-143, Revision 4 (April 2007) (Excerpt of Document) ("Exhibit 16") at 28.

²⁵ *Id.*

²⁶ Contract, Exhibit 1, at B.4.

²⁷ *Id.* at B.5.

perform all construction management services required.²⁸ The Contract prohibited MOX Services from self-performing construction:

No construction work shall be awarded to the firm that designs the MOX Fuel Fabrication Facility or its subsidiaries or affiliates, except with the approval of the Secretary or his authorized representative Construction Management activities are not prohibited and may be performed by the prime contractor.²⁹

Instead, the Contract required MOX Services to competitively procure fixed-price subcontracts for the construction work:

The Contractor shall not perform any construction with its own forces. All construction activities shall be procured on a competitive fixed-price basis to the maximum extent practicable.³⁰

Thus, MOX Services' role initially was limited to that of a construction manager, implementing NNSA's construction performance strategy. In directing this performance strategy, NNSA sought to reduce costs through the use of competitive bidding among technically capable fixed-price subcontractors.³¹ NNSA controlled and directed the construction performance strategy, standing to benefit from its success and accepting the risk of its failure.³² Accordingly, Option 1 excluded the risk of NNSA's performance strategy from the cost estimate, and included the following assumption:

²⁸ Mod 124, Exhibit 6, at Attachment 1, J.1.39.

²⁹ *Id.* at H.7.

³⁰ *Id.* at J.1.40.

³¹ See E-Mail from Carol Elliot, to Sue King, Subject: Construction Prohibition (Oct. 20, 2008, 2:54PM) ("Carol Elliot E-mail") ("Exhibit 17"); see also Exhibit 1 at I.5 (incorporating by reference FAR 52.244-2 and FAR 52.244-5, calling for competition in subcontracting and the government's consent to subcontract); see generally July 26, 2002 Letter and attachment from James R. Bieschke, Contracting Officer, DOE, to Robert H. Ihde, President, Duke, Cogema, Stone and Webster, regarding Exercise of Option 1 ("Exhibit 18") (listing construction objectives, including procurement of "all construction activities on a competitive fixed-price basis to the maximum extent practicable").

³² A reviewing court will determine which party "assumed the risk" of the occurrence of an event that inhibits performance. *DeCarlo and Doll, Inc. v. Dilozir*, 45 Conn. App. 633, 643 (1997) ("Determining whether the non-occurrence of a particular event was or was not a

The estimate assumes an *adequate number* of suppliers, vendors and subcontractors with NQA-1 programs *that have capacity and technical capabilities* to support project schedule.³³

NNSA's strategy ultimately proved unworkable, and NNSA removed the prohibition on MOX Services' self-performance of significant work scope. This change was reflected in significant cost increases.

basic assumption involves a judgment as to which party assumed the risk of its occurrence In making such determinations, a court will look at all circumstances, including the terms of the contract.”) (internal citations omitted); *see also Salisbury Special Tool Co.*, ASBCA 37530, 89-2 BCA ¶ 21,838 (where the government, as the owner, designates a particular subcontractor as a sole source, the government necessarily warrants that the source exists and has the ability to produce the product).

³³ *See* Basis of Estimate, BCP # 05-011 (Feb. 3, 2006) (“BCP #05-011”) (emphasis added) (“Exhibit 19”).

III. PROCESS EQUIPMENT CHANGES

Beginning in March 2003, MOX Services repeatedly sought authorization to conduct pilot procurements of select process equipment. MOX Services had determined that early procurements would provide needed information to estimate accurately and reliably the cost and schedule for fabricating and testing the process units. For several years however, due to governmental concern that progress on the domestic MFFF not exceed Russia's progress on its MFFF, DOE refused to allow MOX Services to meaningfully engage potential vendors for this crucial feedback, much less conduct the requested pilot procurements. Rather than being allowed to test its estimating assumptions for these unprecedented procurements in an applied manner, MOX Services had no alternative but to create its estimates in a vacuum, without critical input from the subcontractors who would build the equipment.

Both MOX Services and the government knew the requirement for the U.S. MFFF to proceed in tandem with the Russian MFFF could produce a host of cost increases and schedule delays that could not be predicted, quantified or mitigated. NNSA agreed to accept 100% of the consequences of the risk, whatever the precipitating cause and whatever the associated costs. Accordingly, risks "related to" the "Russian parallelism" requirement explicitly were excluded from the Option 1 Contract, and, excluded from the TPC calculation, would not be part of the estimated costs on which MOX Services' entitlement to incentive fee was based. If these risks materialized, the resulting cost and schedule increases would constitute work outside the Option 1 scope, and MOX Services would be entitled to a further adjustment to the Incentive Fee Band.

In late 2007, after more than four years of denying MOX Services' requests, NNSA finally released MOX Services to conduct pilot procurements. The results were startling. MOX Services learned that the process equipment would be more expensive and time-consuming for vendors to build than MOX Services had estimated and that the effort would require much more input and oversight by MOX Services. Given DOE's stated cause for refusing to authorize pilot procurements, it is clear that, if not for the Russian parallelism requirement, DOE would have allowed pilot procurements before MOX Services submitted its Option 1 proposal. From those pilots, MOX Services would have known well in advance of the Option 1 proposal that MOX Services' estimating models could not be relied upon for process units.

Time has shown that the process unit underestimates were systemic, not isolated. The challenges first identified in the pilot procurement proved to be inherent, or at least tenacious, in this unprecedented project. Americanizing the French reference plant designs and fabricating the process units within the strictures of the NRC's regulatory regime – specifically, the Nuclear Quality Assurance ("NQA-1") criteria outlined by the American Society of Mechanical Engineers ("ASME") – were more difficult and expensive than NNSA and MOX Services anticipated before the pilot procurements. Thus, much of the cost and schedule increases is due to the unrealistically low estimates that resulted from the limited information DOE allowed MOX Services to gather.

That the process unit estimates would prove to be too low unquestionably is “related to” the Russian parallelism requirement. It is precisely the type of risk that NNSA and MOX Services agreed would be excluded from the scope of Option 1. NNSA accepted this risk and thus is responsible for the increased costs of the Project from what is, by contractual definition, added work scope.

The government is responsible for \$1,262,771,618 in out-of-scope costs incurred by MOX Services. Of that amount, \$490,273,674 are discrete costs, which reflect estimated additional costs to fabricate and assemble the units, and to perform Title III engineering and quality assurance (QA) functions. The remaining out-of-scope costs, \$772,497,944, are time-related costs, and reflect the estimated schedule extensions of approximately 42 months for the completion of Option 1 caused by delays in the process unit procurement cycle.¹ As a result, MOX Services is entitled to an adjustment of \$1,262,771,618 to the Incentive Fee Band, and, based on its performance having fallen within that band, it is entitled to incentive fee.

A. Challenges On The Russian MFFF Caused DOE To Refuse MOX Services’ Request To Conduct Process Unit Pilot Procurements

In September 2000, the United States and Russia executed the Plutonium Management and Disposition Agreement (PMDA), under which each party agreed to dispose of at least 34 metric tons of surplus weapons grade plutonium from its nuclear stockpile.² A major tenet of the agreement was that the parties would “implement[] their respective disposition programs in parallel to the extent practicable.”³ This “Russian parallelism” requirement has posed continued challenges to DOE and, by extension, to MOX Services. From the beginning, the United States’ demonstrated commitment to and progress in meeting the requirements of the PMDA have not been matched by Russia. As a result of the uncertainties arising from the Russian MFFF effort, which MOX Services was powerless to affect, NNSA accepted the risks related to the requirement for Russian parallelism.

The PMDA did not dictate the technology each party was to use in reaching the 34 ton requirement. While all along the United States planned to adapt the French MOX technology for use in the U.S. MFFF, for several years Russia planned to use existing equipment from a Siemens plant located in Germany.⁴ In early 2002, however, Siemens

¹ The 2012 Rebaseline included an approximately 42 month delay relative to the 2007 Baseline.

² PMDA, Exhibit 4, art. II, ¶ 1.

³ *Id.*, art. II, ¶ 3.

⁴ Joint U.S.-Russian Working Group on Cost Analysis and Economics in Plutonium Disposition, Scenarios and Costs in the Disposition of Weapons-Grade Plutonium Withdrawn from Russia’s Nuclear Military Program (Apr. 29, 2003) at Executive Summary iii (“Exhibit 20”).

announced that it would dispose of its equipment differently and that it would no longer be available to the Russian MFFF.⁵ Sent back to the drawing board, it was only after several months of discussions with the U.S. that, in December 2002, Russia too elected to adapt the French MOX technology for use in the Russian MFFF.⁶

The driving factor behind Russia's decision to use the French MOX technology was to meet the "essential element" of the PMDA of keeping the Russian MFFF and the U.S. MFFF on "roughly parallel construction and operational schedules."⁷ But, by this point in time, MOX Services had been working for over three years to Americanize the French designs, and, by no later than spring 2003, MOX Services was requesting authority to conduct pilot procurements of U.S. MFFF process equipment.⁸

Russia's switch from using existing German equipment to adapting French technology that would have to be designed and built to Russia's particular needs was the first snag to hit the Russian MFFF which, in turn, caused DOE to slow down MOX Services. It was far from the last. Russia's determination to use the French technology necessarily meant that Russia would rely in large part on the engineering design work MOX Services had performed to date and would continue to develop. This in turn meant that Russian MFFF progress always would be behind that of the U.S. MFFF. This lag, in combination with the Russian parallelism requirement, caused DOE to exert a constant drag on MOX Services' efforts and progress.

Meaningful work on the Russian MFFF design could not begin until the United States and Russia agreed to a liability protocol for MOX Services' work in Russia. The negotiations were contentious and plodding.⁹ The countries completed negotiations on a liability protocol in July 2005,¹⁰ but the agreement did not clear Russian bureaucratic

⁵ *Id.*

⁶ *Id.*

⁷ *Id.* at Executive Summary at iii, Introduction at 3, n. 8.

⁸ Letter DCS-DOE-001138 from T.E. Touchstone, Deputy Project Manager, Duke Cogema Stone & Webster, to Patrick Rhoads, MOX Fuel Program Manager, DOE (June 20, 2003) ("June 20, 2003 Letter") at 9 ("Exhibit 21").

⁹ DOE OIG, Audit Report DOE/IG-0713, Status of the Mixed Oxide Fuel Fabrication Facility (Dec. 2005) ("DOE/IG-0713") at 1 ("Exhibit 22"). This Audit Report states that the "disagreements regarding liability protection for U.S. companies performing work in Russia ... delayed construction of the U.S. facility." *Id.* It further concludes that the "Russian liability issue had a significant impact on the cost and schedule of the [U.S. MFFF] project." *Id.* at 2.

¹⁰ *Id.*

channels for over a year. The liability protocol to the PMDA finally was signed on September 15, 2006.¹¹

The liability protocol delay drove DOE to handcuff MOX Services, lest the United States signal to Russia that our country's commitment to implementing the PDMA was no longer linked to Russia's commitment. Indeed, at the time DOE admitted, and the DOE Office of Inspector General ("OIG") agreed, that the Russian liability protocol impasse resulted in a 2½ year delay to the U.S. MFFF.¹² The most significant and impactful manifestation of the Russian parallelism requirement to date was that DOE refused to allow MOX Services to go forward with process equipment pilot procurements.

B. The Government Prevented MOX Services From Conducting Pilot Procurements For Over Four Years

1. 2003-2004: Citing the Need to Maintain Parallelism with the Russian MFFF, DOE Refuses to Authorize MOX Services to Conduct Pilot Procurements

Beginning in early 2003, MOX Services planned to conduct pilot procurements for process units. A vendor forum was planned for June 9-13, 2003, with interested subcontractors to obtain early industry feedback on the clarity and ease of use of process unit designs and input on fabrication coordination.¹³ This objective was in answer to the identified risk attending the "Process Equipment Procurement" effort. Specifically, MOX Services believed that it faced potential difficulties in identifying capable manufacturers to fabricate and test the process units in both the mixed oxide and aqueous polishing portions of the MFFF. This risk was accorded the most critical rank of "Risk Management Level 1, High Priority."¹⁴

DOE rejected MOX Services' pilot procurement requests. In a June 2003 "Procurement Workshop," DOE informed MOX Services that MOX Services could not conduct a pilot procurement because the U.S. government did not want to give the appearance that the development of the domestic MFFF was far ahead of the progress Russia had achieved on its MFFF.¹⁵ DOE placed all process unit procurements on indefinite hold

¹¹ NNSA Press Release, "U.S. and Russia Sign Liability Protocol" (Sept. 15, 2006) ("Exhibit 23").

¹² DOE/ID-0713, Exhibit 22, at 7.

¹³ June 20, 2003 Letter, Exhibit 21, at 9.

¹⁴ *Id.*

¹⁵ Letter DCS-DOE-001103 from T.E. Touchstone, Deputy Project Manager, Duke Cogema Stone & Webster, to Patrick Rhoads, MOX Fuel Program Manager, DOE (Sept. 18, 2003) at 1 ("Exhibit 24").

until Russia proved its commitment to meeting its MFFF obligations. To maintain a rough parallelism with Russia, DOE not only forbade MOX Services from conducting pilot procurements but also demanded that MOX Services cancel its long-planned vendor forum designed to capture industry's feedback on its ability to manufacture the process units.¹⁶ MOX Services was "not able to promote in a public manner the intent ... to go forward ... with procuring MFFF equipment" before the "direction of the Russian project firm[ed]."¹⁷

DOE's refusal to allow MOX Services to move forward with procurement activities continued despite MOX Services' warnings that certain process units were on the MFFF critical path.¹⁸ In January 2004, DOE indicated that it likely would not release MOX Services to conduct procurements for the entire calendar year, and DOE asked MOX Services to assess the impact of that eventuality.¹⁹ Demonstrating the importance of involving the vendor community in the design effort, in its February 2004 response to DOE's request, MOX Services repeated its previous admonitions to DOE that it was critical that MOX Services be allowed to conduct some procurement activity.²⁰

MOX Services proposed that NNSA allow it to enter into BOAs with select process equipment vendors. MOX Services had two reasons for doing so. First, MOX Services sought "to obtain product information on vendor supplied components ... to support development of detail design of process units, systems or equipment."²¹ MOX Services informed DOE that vendor feedback garnered from BOA relationships may result in "significant design changes," which would likely impact the designs of several process units.²² MOX Services feared that DOE was forcing MOX Services to continue with the design of process units to a build-to-print level of specificity in a vacuum, prohibited by DOE from learning what the marketplace already offered. MOX Services urged DOE to free it to incorporate established designs and manufactured components into the process units, rather than force MOX Services to continue its design work with blinders on.

¹⁶ *Id.* at 2.

¹⁷ *Id.* at 1, 2.

¹⁸ Duke Cogema Stone & Webster, MOX Fuel Fabrication Facility: DCS Recommendation to DOE for Acquisition of Process Units (July 29, 2003) ("DCS Recommendation") at 2 ("Exhibit 25").

¹⁹ Letter DCS-DOE-001486 from Ed Brabazon, Vice President, Duke Cogema Stone & Webster, to James V. Johnson, Technical Manager, DOE (Feb. 19, 2004) ("Exhibit 26").

²⁰ *Id.*

²¹ *Id.* at 1.

²² *Id.* at 2.

Second, MOX Services reasonably believed that efficiently procuring the process units depended in large part on testing the capabilities of the marketplace. To this end, MOX Services requested that it be allowed to enter BOAs with certain vendors, under which MOX Services could release select designs “to be appropriately interfaced with the equipment.”²³ MOX Services set forth the reasoned justification that such pre-arrangements would result in an “improved price and reduced delivery time” once an order was placed.²⁴

MOX Services explained to NNSA that such limited activity would not involve any financial or procurement commitment but would allow MOX Services to obtain vendors’ engineering input without compromising the government’s fidelity to the PDMA’s Russian parallelism requirement. At this point, MOX Services had been working on the process unit designs for over three years, yet it had not yet been allowed to gather vendor feedback on the constructability of the designs or on industry’s capability to build the units to NRC’s quality standards.

Despite MOX Services’ insistence to NNSA that conducting early procurements would generate critical information to enable MOX Services to obtain the process equipment in a timely and cost-effective manner, NNSA continued throughout 2004 to refuse to allow MOX Services to proceed.

2. 2005-2007 Baseline: The Government Continues To Prohibit Pilot Procurements

In February 2005, to support DOE decision-making on the MFFF baseline, DOE directed MOX Services to participate on several joint review teams, including one focused on the process equipment acquisition strategy.²⁵ In April 2005, the joint DOE-MOX Services team released its final report, “MFFF Rebaselining Team – Process Equipment Acquisition Strategy.”²⁶ In the report, MOX Services again, and repeatedly, requested to be allowed to conduct a few early process unit procurements.²⁷

Specifically, MOX Services recommended that DOE allow it to proceed on four design-build units and two build-to-print units.²⁸ The recommendation was made under the

²³ *Id.* at 3.

²⁴ *Id.* at 1.

²⁵ Letter DCS-DOE-002125 from L.R. Barnes, President, Duke Cogema Stone & Webster, to Kenneth M. Bromberg, DOE (June 2, 2005) (“June 2, 2005 Letter”) at 1 (“Exhibit 27”).

²⁶ *Id.* at 3.

²⁷ *Id.* at vi, 37.

²⁸ *Id.* at E2-E3.

MFFF base contract because process equipment purchased in the normal course was slated to occur under MA17 of the Option 1 contract.²⁹

MOX Services emphasized several benefits of the requested pilot procurements. The pilots would promote MOX Services' understanding of the market's capability to complete successfully the different types of design-build and build-to-print units. MOX Services also stated that the pilot procurements would provide applied indications of subcontractor costs and durations for process unit design and assembly, among other subcontractor feedback. Additionally, MOX Services noted that the initial procurements would establish a practical, tested baseline in anticipation of future procurements of the same type.³⁰

Throughout the Acquisition Strategy document, the DOE-MOX Services team identified continuing DOE-imposed constraints on MOX Services' procurement activity. For example, DOE hampered MOX Services' process unit design strategy by refusing to authorize MOX Services to pursue BOAs to set the parameters by which subcontractors could provide critical design input.³¹ DOE also hindered MOX Services' ability to implement a cogent process unit assembly strategy by, among other things, refusing to release MOX Services to select vendors for any units.³²

Instead of allowing MOX Services to take the most logical and repeatedly requested approach of conducting pilot procurements, DOE limited MOX Services to assessing the capability and capacity of the marketplace through vendor questionnaires and visits. Notably, this effort did not include even attempting to capture information relevant to MOX Services' ability to generate accurate cost and schedule estimates.³³

Moreover, DOE severely limited MOX Services' ability to share information about the process units with prospective vendors. Thus, even if they wanted to, vendors could not provide MOX Services meaningful feedback to inform MOX Services' cost and schedule estimates. In order to obtain DOE approval to begin dialogs with potential vendors, MOX Services had to promise that it would not discuss Project details such as dates, quantities, drawings or budget, and that it would not issue any procurement documents.³⁴

²⁹ *See id.* at E-1.

³⁰ *Id.* at vi, 37, E1.

³¹ *Id.* at 2-3, A-1 to A-2.

³² *Id.* at A-4 to A-5.

³³ Letter DCS-DOE-002225 from Frank T. Haseltine, Vice President & Business Manager, Duke Cogema Stone & Webster, to Martin Newdorf, DOE (August 30, 2005) at 1 ("Exhibit 28").

³⁴ June 2, 2005 Letter, Exhibit 27, at 32.

DOE authorized MOX Services to engage potential contractors only after MOX Services assured the contracting officer that MOX Services would share only the barest parameters of the Project with vendors.³⁵ Specifically, MOX Services promised that it would limit the information it showed to vendors to photographs of certain process units, very rough estimates of the delivery schedule, verbal summaries of the units' size and weight, and a video of the MELOX facility.³⁶ Accordingly, the August 30, 2005 market assessment that formed the second part of the process equipment acquisition team's output exclusively addressed the supposed capability and capacity of the marketplace, and not the likely cost and duration of procuring the process units.

The MFFF maintained the status quo whereby MOX Services was prohibited from conducting process unit pilot procurements through its submission of its Option 1 proposal on March 16, 2006, and through the 2007 Project baseline. MOX Services finalized its Process Unit Estimating Methodology in October 2005 and submitted it to DOE as part of its Option 1 Basis of Estimate. Thus, the October 2005 estimates were carried forward into MOX Services' proposal. DOE authorized MOX Services' performance baseline (Critical Decision 2) and start of construction (Critical Decision 3) in the same document.³⁷ The performance baseline was authorized as of April 10, 2007, and the start of construction was authorized as of August 1, 2007.³⁸ Because DOE did not authorize process unit pilot procurements under the base contract,³⁹ MOX Services entered the Option 1 Contract with completely untested process equipment estimates.

³⁵ *Id.* at 35-36.

³⁶ *Id.* at 36.

³⁷ Letter NA-07-046 from Clay H. Ramsey, Federal Project Director, NNSA to Dave Stinson, President and Project Manager, Shaw AREVA MOX Services, LLC, (April 24, 2007) ("Exhibit 29"). The CD-2/3 approval was based on the Updated Minutes of the July 21, 2006 Energy Systems Acquisition Advisory Board meeting, which was attached to the authorization memorandum for CD-2/3. The Minutes noted that among the causes of the cost growth on the U.S. MFFF to that point was the 2½ year delay due to the Russian parallelism requirement and the "[u]nanticipated complexities" in adapting the French reference plant technology to use on weapons-grade plutonium in the United States under the NRC regulations.

³⁸ *Id.*

³⁹ DOE authorized Critical Decision ("CD") 3B, "Critical Long Lead Procurements," in April 2006. *See* PEP, Exhibit 16, at 9. This allowed MOX Services to proceed with procurement of trapped equipment, which included various types of tanks. *Id.* at 10. But this limited authorization was not broad or early enough to provide the needed information relative to the process unit estimates.

C. The Process Unit Estimates Necessarily Were Based On Insufficient Information

The March 2006 Option 1 proposal's process unit estimates were based on a traditional manufacturing environment methodology in lieu of the hard data that would have been generated by pilot procurements. This use of the generic methodology was made necessary by DOE's rejection of MOX Services' repeated requests to conduct such early procurements.⁴⁰ Thus, MOX Services had no as-applied data on this unique equipment on which to base its estimates, or at least to act as a check on the realism of estimates produced by substitute means.

The consequences of DOE's refusal to allow MOX Services to conduct pilot procurements to generate accurate process unit estimates were made more acute by the lack of design information available to MOX Services. The Methodology evaluated two major cost variables to produce the cost estimate: (1) Labor and (2) Equipment and Materials.⁴¹

When the United States and Russia agreed to a liability protocol in July 2005, the South Carolina congressional delegation began to assert tremendous pressure on DOE to begin MFFF construction, which included the process unit procurements.⁴² Responding to this political pressure, DOE required MOX Services to estimate the costs of the MFFF process units when the equipment and associated software design was only approximately 50% complete.⁴³

The Cost Methodology for the Labor component used a "top down" approach for all 97 units.⁴⁴ This approach selected the simplest process unit of each of three types – glovebox, non-glovebox, and laboratory process unit – and then, using a variety of factors, estimated the amount of craft and non-craft labor that would be needed to build the unit.⁴⁵

⁴⁰ Contract No. DE-AC02-99CHI10888 MOX Fuel Project Option 1 Proposal Submittal, Volume I, Introduction (March 15, 2006) (excerpts) and U.S. Department of Energy, Work Breakdown Structure Dictionary, Part II Element Definition, WBS Element Code 01, Capital and Operating and "Process Unit Cost Estimate Methodology" (October 10, 2005), Methodology at 1 (collectively "Exhibit 30").

⁴¹ Exhibit 30, Methodology, at 1.

⁴² See Discussion in REA Section V.C.3.

⁴³ *Id.* at Option 1 Proposal 1-3.

⁴⁴ *Id.* at Methodology 9.

⁴⁵ *Id.* at 8-9.

MOX Services applied labor rates to the labor hours to produce Labor cost baselines,⁴⁶ and, using “complexity factors,” extrapolated the baselines to all other units of the same type.⁴⁷

The Materials Methodology was similar to that of Labor. MOX Services chose representative units of each type and attempted to secure estimates for each type of subassembly that comprised the units (such as glovebox components) and purchased and fabricated parts.⁴⁸ Once the estimates were established for the reference units, these were used to extrapolate materials costs to other units of the type “to the maximum extent possible,” again using multiple complexity factors.⁴⁹ But in this process, DOE prevented MOX Services from sharing sufficient information with vendors to enable them either to prepare estimates on complete process units or even to solicit estimates on Americanized versions of equipment.⁵⁰

In short, the generic process unit estimating methodology MOX Services had to use was a poor substitute for one based on and applied in pilot procurements. The accuracy of the estimates depended on untested data on a handful of process units and extrapolated to the process units at large.

DOE was well aware of the potential consequences of the severe estimating constraints under which MOX Services was required to operate. The caveats concerning the reliability of the process unit estimates included in MOX Services’ Cost Estimating Methodology were underscored in the External Independent Review (“EIR”) of the CD 2/3 Baseline commissioned by DOE. Among other concerns, the EIR noted that the extrapolations were based on equipment designs that were not even half complete, and it thus recommended that budgetary quotes be obtained for all process units. The EIR also recommended that MOX Services’ estimates be considered merely “conceptual” and not “budgetary.”⁵¹ Overall, the EIR found MOX Services’ cost estimating methodology and overall plan for purchasing process equipment to be reasonable.⁵² But, like MOX Services,

⁴⁶ *Id.*

⁴⁷ *Id.* at 9-10. The accuracy of the Labor estimate was further hampered by the absence of engineering drawings for the units that would provide the cost and schedule basis from which all other units would be drawn. *Id.* at 8.

⁴⁸ *Id.* at 23.

⁴⁹ *Id.* at 23, 26.

⁵⁰ *Id.* at 24-25.

⁵¹ Burns and Roe Enterprises, Inc., External Independent Review of the Mixed Oxide Fuel Fabrication Facility (MFFF) Project Critical Decision 2/3 Baseline (BREI-LSP-R-06-03), for the U.S. Department of Energy (June 2006) (“EIR”) at 22 (“Exhibit 31”).

⁵² *Id.* at 141-142.

the EIR team was severely limited in the review methodology DOE allowed it to pursue. The EIR stated that although its review plan “anticipated communication with domestic suppliers to determine the reasonableness of the estimates for planned domestic purchases,” DOE instructed the EIR “not to contact any vendors because it could potentially ‘compromise the procurement process’.”⁵³

D. The Government Is Responsible For MOX Services’ Increased Process Unit Costs

As shown above, from early 2003 on, MOX Services repeatedly urged DOE to allow MOX Services to conduct process equipment pilot procurements. One of the express purposes of MOX Services’ requests was to obtain better indications of process unit subcontractor costs and schedule durations for completing the design, fabricating and assembling, and testing and installing the units in a domestic context governed by strict NRC regulations.

It was ill-considered for DOE to require MOX Services to estimate the cost and schedule of the process units without the benefit of pilot procurements. The U.S. MFFF is an incredibly complex facility that will deploy unique technology on a great scale, and its design is governed by a strict set of NRC regulatory standards that were untried in the marketplace in which the process units would be fabricated. By preventing MOX Services from conducting pilot procurements to inform its estimates, DOE assumed the risk and the follow-on effects when those hamstrung estimates fell far short of reality.⁵⁴ In any event, the significant underestimates on the process units, in terms of discrete costs and schedule, fall comfortably within the Option 1 Contract provision whereby NNSA accepted risks related to the Russian parallelism requirement and limits the scope of the Contract to exclude all impacts resulting from that requirement.

1. NNSA Accepted the Risk of Shortfalls in the Process Unit Estimates

On June 6, 2005, MOX Services identified Risk #225 as the possible impact that the delay of the Russian MFFF could impose on the U.S. MFFF.⁵⁵ Risk #225 was labeled a

⁵³ *Id.*

⁵⁴ This is so, even if DOE itself was obliged to deny MOX Services the ability to conduct pilot procurements for legitimate international diplomatic reasons. DOE may have imposed the restriction on pilot procurements in response to State Department insistence that the domestic MFFF not progress too far ahead of the Russian MFFF. The impetus is of no moment, however, as NNSA cannot, by pointing blame at another federal agency, escape the risk it assumed both contractually and by hobbling MOX Services’ estimating function.

⁵⁵ The risk’s “impacted scope” was stated to be “construction,” which included the procurement and installation of the process equipment.

“DOE Program Risk.”⁵⁶ Specifically calling out the then two-year delay of a United States-Russia liability protocol, Risk #225 observed that the time needed to work out this international agreement (as well as one on technology transfer) was uncertain.⁵⁷ The likelihood of the risk materializing was identified as “high,” and, indeed, the Russian MFFF had been behind the U.S. MFFF ever since the PDMA was executed in 2000.⁵⁸ MOX Services estimated the consequence of Risk #225 to be “severe” and, as a placeholder, estimated the risk to be 36 months.⁵⁹

In the Option 1 negotiations, MOX Services, in collaboration with NNSA, assigned values and responsibilities to the identified Project risks through the Technical and Programmatic Risk Assessment (“TPRA”) for Critical Decision 2 (approval of the performance baseline) and Critical Decision 3 (authorization of the remainder of construction activities). The CD 2/3 TPRA Rev. 3, issued in June 2006, assigned Risk #225 “zero dollar value” (and it was not included in the schedule risk recap) because it “[was] transferred and accepted by DOE.”⁶⁰

NNSA’s acceptance of the Russian parallelism risk was included in the Option 1 Contract, first in the MFFF Project Execution Plan, and then in the definitized Option 1. Section 4 of the PEP, “Project Definition,” “descri[bes] the MFFF Project elements, describes how they are related, and identifies the salient interfaces.”⁶¹ As part of the Option 1 cost baseline, PEP (Rev. 4), issued in April 2007, provided that the former Risk #225 was a “Risk Outside Scope” that would not contribute to the calculation of the Project’s

⁵⁶ Letter DCS-DOE-002282 from Frank T. Haseltine, Jr., Vice President, Duke Cogema Stone & Webster, to Martin Newdorf, Federal Project Director, DOE (Oct. 13, 2005) (“Exhibit 32”).

⁵⁷ *Id.*

⁵⁸ *Id.*

⁵⁹ *Id.*

⁶⁰ Duke Cogema Stone & Webster, MFFF Mixed Oxide Fuel Fabrication Facility, Technical and Programmatic Risk Assessment, Critical, Decision 2/3, Revision 3 (June 14, 2006) (“TPRA”) at 5 (“Exhibit 33”).

⁶¹ PEP, Exhibit 16, at 23.

contingency calculations.⁶² The PEP stated the exclusion in very broad terms: “Risks related to the requirement for rough parallelism with the Russian program.”⁶³

The PEP described this risk as “difficult or impossible to quantify” and acknowledged that it carried the possibility of “major impacts.”⁶⁴ In the event that the risk of Russian parallelism materialized, NNSA agreed to “accept these risks and process a change to the project baseline should they occur.”⁶⁵ In other words, the PEP expressly defined the MFFF Project to exclude from its scope any manifestations of risks related to Russian parallelism. In effect, the parties agreed that, if such risks materialized, NNSA would enter a new contract with MOX Services to cover what the PEP defined to be new scope.

The provision that NNSA would bear the risks related to the Russian parallelism requirement, and would treat such realized risks as new work scope, was carried forward into the definitized Option 1 Contract, signed in May 2008, which itself incorporated the language of the PEP.⁶⁶ Option 1 expressly excluded “Risks related to the requirement for rough parallelism with the Russian program” from the parties’ estimated costs and negotiated fees.⁶⁷

This provision then states that, “as described in the Project Execution Plan, a change rebaseline of the TPC may result when certain Project risks which are not included in the calculations of Project Costs occur.” Those referenced events include

In short, just as the PEP excluded Russian parallelism risk from the Option 1 work scope, the Option 1 definitization did not include the risk in the calculated costs of the Project.

⁶² *Id.* at 28. Among other things, the PEP “defines and discusses technical, schedule, and cost baselines,” and it is the “living document” that governs the project. *Id.* at 4. The PEP also “defines how the project will be accomplished, resource requirements, technical considerations, and roles and responsibilities of the Integrated Project Team.” *Id.*

⁶³ *Id.* at 28.

⁶⁴ *Id.*

⁶⁵ *Id.*

⁶⁶ Mod 124, Exhibit 6, at B.4(a)(iii). The Mod 124 definitization of Option 1 occurred before MOX Services could award any subcontracts for process equipment pilot procurements.

⁶⁷ *Id.* at B.4(a)(iii)(4)(d).

2. The Shortfalls in the Process Equipment Costs and Schedule Estimates Are Realized Risks “Related to” the Russian Parallelism Requirement

Contract interpretation begins with an examination of the plain language of the contract, which, if unambiguous on its face, controls and ends the inquiry. *LAI Services, Inc. v. Gates*, 573 F.3d 1306, 1314 (Fed. Cir. 2009); *Hunt Constr. Gp., Inc. v. United States*, 281 F.3d 1369, 1373 (Fed. Cir. 2002). Here, the inquiry need go no further because, plainly read, the breadth of the phrase “related to” encompasses the nexus between the Russian parallelism requirement and the risk that the process unit estimates would not accurately reflect their costs and schedule.

As an initial matter, the ordinary meaning of “relate” is broad and is defined to mean “to stand in some relation; to have a bearing or concern; to pertain; refer; to bring into association with or connection with.” Black’s Law Dictionary 1288 (6th Ed. 1990). The U.S. Supreme Court has observed that the plain meaning of the phrase “relating to” is “broad.” *Morales v. Trans World Airlines, Inc.*, 504 U.S. 374, 383 (1992); see *Pilot Life Ins. Co. v. Dedeaux*, 481 U.S. 41, 47 (1987) (characterizing the term “relate to” as “deliberately expansive”); *FMC Corp v. Holliday*, 498 U.S. 52, 58 (1990) (stating that the term “relate to” is “conspicuous in its breadth”).

In deciding a matter of contract interpretation, the Federal Circuit has noted that “[i]n general, ‘related to’ means one thing has some ... connection to another thing.” *Tyco Healthcare Group LP v. Ethicon Endo-Surgery, Inc.*, 587 F.3d 1375, 1378 (Fed. Cir. 2009). The court further noted that “[i]n legal parlance, ‘related’ takes meanings with similar breadth.” *Id.* at 1379; see *Coregis Insurance Co. v. American Health Foundation, Inc.*, 241 F.3d 123, 128-29 (2d Cir. 2001) (Sotomayor, J.) (noting that the term “‘related to’ ... is not necessarily tied to the concept of causal connection” and holding as a matter of law that the phrase’s use in an insurance contract unambiguously excluded coverage).

Here, the risk that the process unit estimates would not reasonably reflect the costs or time required to procure the process units are “related to” the Russian parallelism requirement. For years, DOE refused MOX Services’ requests to conduct pilot procurements out of concern that doing so would violate the PMDA by implementing the U.S. MFFF far ahead of the Russian MFFF. As a result, MOX Services had to use untested, generic estimating methodology on unique equipment, rather than what it sought – real world application of the designs in a vendor’s fabrication and assembly environment. The Option 1 Contract protected MOX Services from the possibility that the generic estimates would fall far short of the discrete costs and schedule durations needed by excluding from the Contract’s scope risks “related to” the Russian parallelism requirement.

E. The Impact Of Added Process Unit Scope

The generic estimating methodology produced systematic underestimates in terms of discrete costs (how much it cost to manufacture the process units) and Hotel Load costs (how long the process units would take to build, and thus cause prolonged Project support costs

that are not tied to a particular end product). Pre-Option 1 pilot procurements would have provided MOX Services critical cost and schedule information and would have revealed the estimates produced by generic means to be unrealistically low. This was proven when DOE finally authorized MOX Services to conduct pilots.

If DOE had allowed MOX Services to conduct the pilot procurements in 2003 or 2004, MOX Services would have known that the process unit cost estimates determined through generic means were much too low and the schedule estimates far too short, and MOX Services would have adjusted the estimates accordingly. And, although MOX Services' negotiated fee was spread over several fee pools, the total fee was based on 7% of this underestimated total cost of the MFFF Project.

1. MOX Services' Pilot Procurements Revealed That the Process Unit Estimates Were Unrealistically Low

Despite MOX Services' requests for authority to conduct process unit pilot procurements beginning in early 2003, DOE did not authorize this activity until 2007.⁶⁸ These pilot procurements came too late to impact the Option 1 cost estimates which, with modest adjustments, were carried forward into the 2007 Baseline and the definitized Mod 124 in May 2008.

Beginning in late 2007, MOX Services piloted two of the simplest glove box process units, the Pellet Repackaging ("PAD") and Scrap Box Loading Unit ("PAR"). The information generated from these pilots was profound and bracing. Among other things, the pilots revealed a tremendous shortfall in the process unit cost and schedule estimates. MOX Services learned that actual costs for completing the design and building the units would be much greater and would take much longer.

Under the generic estimating methodology MOX Services was forced to employ in lieu of pilot procurements, the PAD and PAR units together were estimated to cost \$1,149,324, not including Title III engineering. The actual cost of these two units was \$4,158,284 – a variance of over 250%.

⁶⁸ See April 24, 2007 Letter, Exhibit 5 (authorizing construction activity to begin on August 1, 2007). When DOE authorized Option 1 construction activity, the documentation supporting this decision noted that the U.S. MFFF had been delayed 2½ years due to Russian parallelism concerns.

Chart III.1 PAD / PAR Cost Growth

Cost Account	Category Description	[A]	[B]	[C] = B - A	[D] = C / A
		2007 Baseline	2012 Rebaseline (Actual Costs)	Cost Growth	Percent Variance
1708.8748	PAD	\$ 594,028	\$ 2,096,746	\$ 1,502,718	253%
1708.8749	PAR	555,296	2,061,538	1,506,242	271%

Further, the PAD and PAR units took approximately 70% longer to manufacture and test than had been estimated and included in the 2007 Baseline.⁶⁹

Chart III.2 PAD Schedule Variance

PAD Delay Measurements (2007 Baseline vs. January 2012 Update)									
No.	Delay Issue	As-Planned			As-Built			Variance	
		Start	Finish	Duration	Start	Finish	Duration	Var	% Var
1	Process Unit Manufacturing	2/9/09	3/15/10	400	7/30/08	5/28/10	668	268	67.00%
2	In-Advance Testing / Ship	3/16/10	6/11/10	88	5/29/10	10/29/10	154	66	75.00%
	Total			488			822	334	68.44%

Chart III.3 PAR Schedule Variance

PAR Delay Measurements (2007 Baseline vs. January 2012 Update)									
No.	Delay Issue	As-Planned			As-Built			Variance	
		Start	Finish	Duration	Start	Finish	Duration	Var	% Var
1	Process Unit Manufacturing	3/25/09	3/31/10	372	7/30/08	10/31/09	459	87	23.39%
2	In-Advance Testing / Ship	4/1/10	7/2/10	93	11/1/09	9/24/10	328	235	252.69%
	Total			465			787	322	69.25%

The PAD and PAR procurement was explicitly designed to be a pilot procurement. MOX Services chose “to pilot these units ... based on their small size and relative simplicity in comparison to other process units.”⁷⁰ Throughout the pilot, MOX Services endeavored to capture the pitfalls and successes in the context of an actual process unit procurement in order to assess and test, among other things, the accuracy, usability and completeness of the designs, and the constructability of the units to the NRC standards.⁷¹

⁶⁹ The as-built dates and duration calculation are taken from the January 29, 2012 Schedule Update in MOX Services’ integrated Project schedule developed in Primavera P6 Professional Project Management.

⁷⁰ Chris Livingston, LL-2010-251, PAR/PAD Process Unit Fabrication, Assembly, and Test Pilot Project: Lessons Learned/Process Improvement Report (Sept. 24, 2010) (“Pilot Procurement Lessons Learned”) at 3 (“Exhibit 34”).

⁷¹ *Id.*

The subcontract to fabricate and assemble the PAD and PAR process units was awarded on September 18, 2007, and the units were delivered to the MFFF site on or about August 2009. On September 24, 2010, MOX Services issued “PAR/PAD Process Unit Fabrication, Assembly, and Test Pilot Project: Lessons Learned/Process Improvement Report.”⁷² The Report includes a staggering 67 distinct Lessons Learned, grouped into seven areas that cover the entire procurement process – from the unit designs to soliciting and selecting a vendor, fabrication, and assembly and testing, through project controls and management.

Moreover, the independent, DOE-commissioned “Root Cause Analysis of Cost Increases” on the MFFF, issued in May 2014, echoes many of the same themes as the Lessons Learned. The similarities among the two studies are telling in two respects. First, while the Lessons Learned was focused on prospectively addressing challenges in procuring process units, the Root Cause Analysis (“RCA”) retrospectively examined the cost increase drivers and the underlying causes of the cost increases. That the RCA discusses many of the same problems that were revealed in the Lesson Learned four years earlier establishes that, had the pilot procurements been conducted years earlier, the resulting higher cost estimates would have provided a sounder basis for the cost estimates.

Second, the RCA was issued approximately 3½ years after the Lessons Learned and examined the completed or in-process procurements of dozens of process units. The similarities of the causes in the later document to the lessons of the earlier one establishes that, even though the Lessons Learned applied to only two of the smallest, simplest units, the lessons from that exercise accurately could be exported to all of the process units. Therefore, the RCA strongly supports the conclusion that, had DOE allowed MOX Services to conduct pilot procurements in 2003-04 (even on the very limited scale of the PAD/PAR pilot), the overall process unit cost and schedule estimate, and the associated negotiated fee, would have been much greater.

Virtually all of the lessons from the PAD/PAR pilot procurement have obvious cost and/or schedule implications, as confirmed in the Root Cause Analysis. A sample of the lessons learned and their analogs in the RCA follows.

PAD/PAR Design Lessons. Among the several design lessons, the pilot produced many more engineering change requests than anticipated, which triggered MOX Services to increase its Title III engineering staff.⁷³ Had MOX Services conducted the pilot in 2003-04, the pilot would have highlighted the need for additional Title III resources and the difficulties and expense of implementing the French reference plant designs in the United States. The pilot beginning in late 2007 also revealed the need to revise commercial grade item

⁷² *Id.* MOX Services incorporated the lessons from the PAD/PAR pilot into later process equipment solicitations. *Id.* at 4.

⁷³ Lessons Learned, Exhibit 34, at 8.

evaluations and to create commercial grade acceptance requirements.⁷⁴ It uncovered the need to augment MOX Services' QA staff to help vendors meet the applicable quality requirements. Additionally, when DOE finally allowed MOX Services to conduct a pilot, MOX Services discovered that some glovebox tolerances could be relaxed without compromising safety or functionality.⁷⁵ Because this lesson was delayed, MOX Services had to revisit the tolerances applicable to all gloveboxes, causing what would have been avoidable rework.

The RCA cites many of the same difficulties, unaccounted for in the Option 1 estimate and definitization, with respect to the process unit designs. Regarding the difficulty of translating the French reference plant designs to the domestic MFFF, the study states that the Project "had an overly optimistic view of the ... level of effort required to complete the design, which was the result of the misconception that the French design could be directly applied to the MFFF."⁷⁶

Further, like the Lessons Learned, the RCA cited the difficulty encountered in identifying vendors that could meet the applicable nuclear quality standards. The Analysis states that the cost estimate "did not consider all of the costs for completing the design, procurement of materials and equipment to NQA-1 standards."⁷⁷ This pitfall, underappreciated at the time of the Option 1 proposal but evident in the PAD/PAR pilot, was accorded a separate section in the RCA. The Analysis is nearly identical to the Lessons Learned on this point. It states that the estimate fell short by underestimating the "added cost charged by vendors to meet NQA-1 requirements," and that MOX Services' costs for assisting vendors in meeting nuclear standards "was also not properly accounted for in the CD-2/3 cost estimate."⁷⁸

⁷⁴ *Id.*

⁷⁵ *Id.* at 9.

⁷⁶ Parsons, Longenecker & Associates, Root Cause Analysis of Cost Increases, Mixed Oxide Fuel Fabrication Facility and Waste Solidification Building, Savannah River Site, South Carolina, (May 23, 2014) ("RCA") at 2-8, 2-17 (stating that the belief that the French design easily could be adapted to the domestic MFFF "proved to be inaccurate and significantly underestimated the effort and costs required to Americanize the French design") ("Exhibit 35").

⁷⁷ *Id.* at 2-12.

⁷⁸ *Id.* at 2-21; see DOE publication "NQA-1: An Overview for Federal Project Directors" at p. 12 (MFFF Federal Project Director Clay Ramsey stating that process equipment and construction vendors failed to appreciate how stringent NRC's regulations are, and that, as a result, "A lot of unplanned effort has had to go into both the coaching and instruction of these suppliers, and the monitoring and oversight and additional inspection to make sure we're getting what we're supposed to get") ("Exhibit 36").

The RCA also cites as a cost increase driver the overly tight tolerances that emerged from a direct replication of the French design to the domestic context. According to the Analysis, such “tolerances often proved unrealistic” for domestic vendors that were not accustomed to them.⁷⁹

The repeated theme of the RCA regarding design issues is not that MOX Services failed to perform well or to properly supervise its vendors, but that the difficulties of replicating the French design in the U.S. simply were not understood at the time of the Option 1 cost estimate. The similarity of the Lessons Learned to the RCA on these issues means that had MOX Services been allowed to conduct pilot procurements in 2003-04, what would later become cost increases would have been captured in the original cost estimate.

PAD/PAR Procurement Lessons. In vetting prospective vendors for the PAD/PAR units, MOX Services learned that many of them were not nearly as qualified as they had represented to MOX Services during the 2005 market assessment.⁸⁰ The pilot procurement revealed that, in fact, there was inadequate capability and capacity in the vendor community to provide the process units to the NRC’s NQA-1 standards. If MOX Services had learned this before Option 1, it would have included in its estimate additional resources to assess vendors and assist them to meet quality standards. Also, it is a basic tenet of economics that lower supply with the same demand equals higher prices. It stands to reason, then, that MOX Services would have submitted higher process unit cost estimates upon realizing that the smaller universe of truly qualified process unit vendors would have more leverage in subcontract negotiations.

The Root Cause Analysis also observes that the capability of the vendor community to produce equipment to nuclear quality levels was weakened by decades of disuse. The Analysis acknowledges what was revealed in the PAD/PAR procurement: (1) the Project had difficulty finding vendors with demonstrated nuclear quality assurance programs to bid on work; (2) the bids of qualified vendors were much higher than expected; and (3) even capable process unit vendors had inadequate document management processes.⁸¹

Fabrication & Assembly Lessons. The pilot procurement unearthed a host of expensive fabrication and assembly challenges. These problems arose throughout the equipment procurement cycle, from solicitation preparation and vendor selection, through fabrication and assembly, and to documenting quality conformance before shipping finished equipment.

Among the cost- and time-intensive challenges that were not anticipated before the PAD/PAR pilots, MOX Services learned that the robustness of prospective vendors’ NQA-1

⁷⁹ RCA, Exhibit 35, at 2-18.

⁸⁰ Pilot Procurement Lessons Learned, Exhibit 34, at 10-11.

⁸¹ RCA, Exhibit 35, at 2-21 to 2-22.

programs was difficult to verify. In response, MOX Services added QA staff to the statement of work and vendor selection processes, with the goals to more efficiently process statements of work and to try to affirm vendors' abilities to meet NQA-1 standards.⁸² The Root Cause Analysis validated this finding from MOX Services' initial procurement and concluded that had MOX Services anticipated the atrophy in vendors' NQA-1 programs, "the problems encountered due to lack of material and equipment availability in support of construction could have been prevented or mitigated." Such augmentation of QA staff would be costly, of course, but with the pilot procurements stalled until so late in the contract, these costs were not incorporated in the Option 1 estimates.

The Lessons Learned also revealed that MOX Services lacked the staff that would enable it quickly to address vendor assembly problems. Through the PAD/PAR pilot, MOX Services determined that, by adding field engineers at vendor shops, it could more timely address many of the fabrication and assembly issues that arose, rather than requiring production to stop while the vendor could consult with MOX Services engineers back at the Savannah River Site.⁸³ MOX Services also realized that, to remedy vendor misunderstandings as to nuclear industry requirements, it had to train vendors and add nuclear-experienced personnel to the process unit team.⁸⁴

The RCA echoed these fabrication lessons learned. The Analysis concluded that inadequate field engineering resources had been deployed on the MFFF and that this resulted in added costs when applied design changes on procured equipment could not keep pace with the Project's design evolution.⁸⁵ Consistent with the Lessons Learned document regarding other cost drivers of the MFFF Project, before the PAD/PAR pilot, MOX Services had no way of anticipating that more field engineers would be needed, and these added costs were not included in the Option 1 estimate or its definitization.

Moreover, the RCA, like the Lessons Learned, recognized the inefficiency inherent in requiring vendors to conduct long-distance exchanges with MOX Services in order to address design problems. The RCA noted that the "exchange with vendors over design problems and solutions was a time-consuming and costly design issue and appears to be a significant factor in the increased cost and schedule delays with equipment procurement."⁸⁶ Again, the necessary costs and time of performing this additional work was not factored into the Option 1 estimates.

⁸² Pilot Procurement Lessons Learned, Exhibit 34, at 15.

⁸³ *Id.* at 12.

⁸⁴ *Id.* at 12-13.

⁸⁵ RCA, Exhibit 35, at 2-24 to 2-25.

⁸⁶ *Id.* at 2-18 to 2-19.

The Lessons Learned showed that additional MOX Services QA personnel had to be deployed to vendor shops following fabrication to ensure that the NQA-1 documentation required by NRC was complete and correct before equipment was shipped to the MFFF.⁸⁷ Similarly, the RCA acknowledged the reduced effectiveness of vendors' NQA-1 programs and the need for unexpected funds to improve the vendors' abilities in this regard. As did the Lessons Learned, the RCA approved of MOX Services' decision to "provide direct in-shop assistance to vendors in implementing their NQA-1 programs," including assisting in training and reviewing and approving vendors' NQA-1 implementing procedures.⁸⁸ The Analysis found that the "need to provide such services were not anticipated when the CD-2/3 cost estimate was developed."⁸⁹

Last, cost-increasing and schedule-prolonging problems with the process equipment were revealed when MOX Services assembled the PAD and PAR units at MOX Services' assembly facility at the MFFF site. The PAD/PAR pilot showed that assembly craft workers at the PAF required a greater skill set than anticipated and thus required additional training or could demand higher wages, or both.⁹⁰ The RCA confirmed this lesson, concluding that craft labor with nuclear experience could demand higher hourly rates and overtime opportunities.⁹¹

2. MOX Services Estimates that It Will Incur \$490,273,674 in Discrete Out-Of-Scope Costs Related to the Russian Parallelism Requirement

MOX Services has experienced significant additional scope from that included in the Option 1 contract. To estimate the impact of this out-of-scope work, MOX Services has compared the estimates set forth in the 2007 Baseline to those in the 2012 Rebaseline.⁹² In this REA, MOX Services claims incentive fee based on an adjustment adding to the

⁸⁷ Pilot Procurement Lessons Learned, Exhibit 34, at 14.

⁸⁸ RCA, Exhibit 35, at 2-22.

⁸⁹ *Id.*

⁹⁰ Pilot Procurement Lessons Learned, Exhibit 34, at 18.

⁹¹ RCA, Exhibit 35, at 2-26.

⁹² It is appropriate and reasonable for this REA to measure the impact by comparing the 2007 Baseline to the 2012 Rebaseline. The 2007 Baseline carried forward the estimates contained in MOX Services' Option 1 proposal, and the 2012 Rebaseline is the last comprehensive EAC that reflects a full funding profile through Project completion. In other words, the best estimate of the out-of-scope process unit-related costs are those developed for the 2012 Rebaseline, which incorporates approximately 4½ years of Project experience and significant hard data (actuals) from the 2007 Baseline.

Incentive Fee Band \$1,262,771,618 in out-of-scope costs as of the 2012 Rebaseline related to the Russian parallelism requirement.

The following sections describe each of the categories of process unit-related direct costs on which MOX Services incurred additional cost and for which the government is responsible. The discrete cost impacts of this added scope appear in four specific categories, each directly related to process unit construction engineering and manufacturing: (1) fabrication, (2) assembly, (3) Title III Engineering, and (4) Quality Assurance.

a. Costs of added scope for process unit fabrication

Process Unit Fabrication refers to costs associated with planning, manufacturing, and process unit installation support to the construction of the MFFF.⁹³ The claimed out-of-scope costs for the fabrication of process units is the difference between their estimates set forth in the 2007 Baseline and the 2012 Rebaseline.

In the 2012 Rebaseline, MOX Services estimated that the added scope for the fabrication of process units would cost \$285,134,337 – 122% more than the 2007 Baseline estimate. As shown above, the pilot program for the PAD and PAR process units revealed an out-of-scope cost variance of 250% over the 2007 Baseline. If the pilot procurements had been conducted before the Option 1 estimate, MOX Services reasonably could have increased its cost estimate to reflect this variance. Armed with the knowledge of the true difficulty of Americanizing the French reference plant designs,⁹⁴ MOX Services reasonably could have estimated that it would cost \$817 million or more to fabricate the process units.⁹⁵ But this REA takes a more conservative approach and is calculated in relation to the difference between the 2007 Baseline and 2012 Rebaseline amounts.

The delta, or claimed out-of-scope work, between the 2007 Baseline and the 2012 Rebaseline is \$285,134,337. But in this portion of the REA, MOX Services claims entitlement to an adjustment adding only \$275,266,043 of this amount to the Incentive Fee Band. This \$9,868,294 downward adjustment (plus additional ongoing costs that accrue

⁹³ Proposal 12-004, Exhibit 9, at WBS Definitions 8704, 8750, 8764, and 8782.

⁹⁴ It bears repeating that the PAD and PAR units were chosen for the eventual pilot procurements because they were among simplest process units. Pilot Procurement Lessons Learned, Exhibit 34, at 3.

⁹⁵ Extrapolating to all process units the 250% variance encountered on the PAD and PAR units to the estimates generated on all process units by use of the traditional methodology would produce an estimate of well over \$800 million. ($\$233,376,860 \times (1 + 250\%) = \$816,819,010$.)

after the preparation of this REA) represents the increased costs associated with the deferment of work by vendors on 23 contracts.⁹⁶

b. Costs of added scope for process unit assembly, materials, and supervision

Process Unit Assembly, Materials and Supervision includes the costs for materials, labor and overhead associated with each of the process units assembled in the Process Unit Assembly Facilities (“PAF”).⁹⁷ The cost of the added scope in this category is \$119,116,350. Of this amount, \$97,294,727 consists of (1) purchased equipment components, such as glove ports, window panels, and fasteners, and (2) finished equipment subsystems, such as pellet presses, homogenizers, conveyors, hoppers, and pellet grinders.⁹⁸ The remaining \$21,821,623 in this category consists of MOX Services’ labor and overhead costs for the Process Unit Design and Commissioning (“PUDC”) Group, including supervision, administrative support, project controls, and PAF construction.⁹⁹ MOX Services claims entitlement to an adjustment to the Incentive Fee Band adding \$118,541,095 of this amount.

MOX Services estimates it will incur these out-of-scope costs due to increased vendor costs to manufacture materials used in the assembly of process units and the vendors’ inability efficiently to perform the assembly scope of work. In order to mitigate these out-of-scope costs, MOX Services established the PUDC Group to provide vendor oversight and to self-perform some of the process unit assembly. In addition, MOX Services built the PAF to house this work, which itself incurred modest cost increases.¹⁰⁰

⁹⁶ Additionally, MOX Services has deducted \$30.5 million from the total cost variance for process unit work scope that MOX Services inadvertently omitted from the Option 1 estimate. PCN 08-0211, dated December 8, 2008, identified \$44.5 million in costs associated with specific process units that were mistakenly not included in Option 1. As of the 2012 Rebaseline, the cost accounts associated with these process units showed these estimates revised down to \$30.5 million. As of the 2012 Rebaseline, the cost accounts associated with the process units showed cost growth in the amount of \$30.5 million. Because these costs cut across multiple cost accounts, this reduction is taken at a bottom line.

⁹⁷ Proposal 12-004, Exhibit 9, at WBS Definitions 8601, 8602, 8791, and 8795. These costs include materials procured under BOAs and those classified as Long Lead Procurements. *Id.* at WBS Definition 8791.

⁹⁸ *Id.* at WBS Definition 8795.

⁹⁹ *Id.* at WBS Definitions 8601, 8602, 8645, 8785, and 8795.

¹⁰⁰ *Id.* at WBS Definition 8785.

c. Costs of added scope for process unit Title III Engineering

Process unit Title III Engineering refers to, among other things, engineering support for process unit fabrication, resolution of design issues, in-advance testing (including test plan and procedures), engineering supervision for process unit installation by the construction group,¹⁰¹ and process unit software design.¹⁰² MOX Services estimated as of the 2012 Rebaseline that it would incur out-of-scope costs of \$56,656,303 for these services.

The amount claimed here reflects out-of-scope costs resulting both from needing more process unit Title III engineers to be on the Project and from needing them longer than estimated in the 2007 Baseline. Both of these impacts were identified from the PAD and PAR pilot programs.¹⁰³ The 2007 Baseline estimated that the Project would require \$27,146,095 in process unit Title III engineering over the course of six years. But, as of the 2012 Rebaseline, MOX Services estimated that these services would require \$83,802,398 over a period of ten years.

d. Costs of added scope for Quality Assurance for process units

MOX Services will incur \$39,810,233 in out-of-scope, self-performed quality assurance (QA) work and hotel load specifically related to process units.¹⁰⁴

The September 2010 PAD and PAR Lessons Learned noted that quality control at the vendor shops was inadequate, resulting in conformance issues after receipt of the process units at MOX Services. Specifically, the Commercial Grade Item Evaluations and the Commercial Grade Acceptance Requirements were poorly understood by vendors, resulting in non-conformance reports upon receipt of the process units.¹⁰⁵ In order to remedy these issues at the vendor shops, the Lessons Learned called for QA to be involved at the vendor locations to perform physical checks on the process units and to conduct final document review for NQA-1 compliance on the equipment to be shipped.¹⁰⁶ Additionally, the Lessons

¹⁰¹ *Id.* at WBS Definitions 8033, 8043, and 8056.

¹⁰² *Id.* at WBS Definition 8045.

¹⁰³ Pilot Procurement Lessons Learned, Exhibit 34, at 8.

¹⁰⁴ The QA cost accounts are based on QA function, not the construction function on which QA services in question are performed. As a result, the characterization and allocation of QA cost growth is based on estimates provided by MOX Services' QA personnel. Thus, while MOX Services knows it experienced \$142,986,892 in cost growth on QA cost accounts, it estimates the allocation of that growth to process units (\$25,152,010), hotel load (\$14,658,222), and construction effort (\$103,176,659), based on the percentage of each QA cost account that MOX Services personnel attributed to those categories.

¹⁰⁵ Pilot Procurement Lessons Learned, Exhibit 34, at 8.

¹⁰⁶ *Id.* at 14-15.

Learned stated that the lack of QA involvement in the Statement of Work (“SOW”) review process resulted in unnecessary delays. This resulted in QA taking responsibility for the SOW documents and signing off on them during the preparation phase of the work.

3. MOX Services Estimates that It Will Incur \$772,497,944 in Additional Hotel Load Related to the Russian Parallelism Requirement

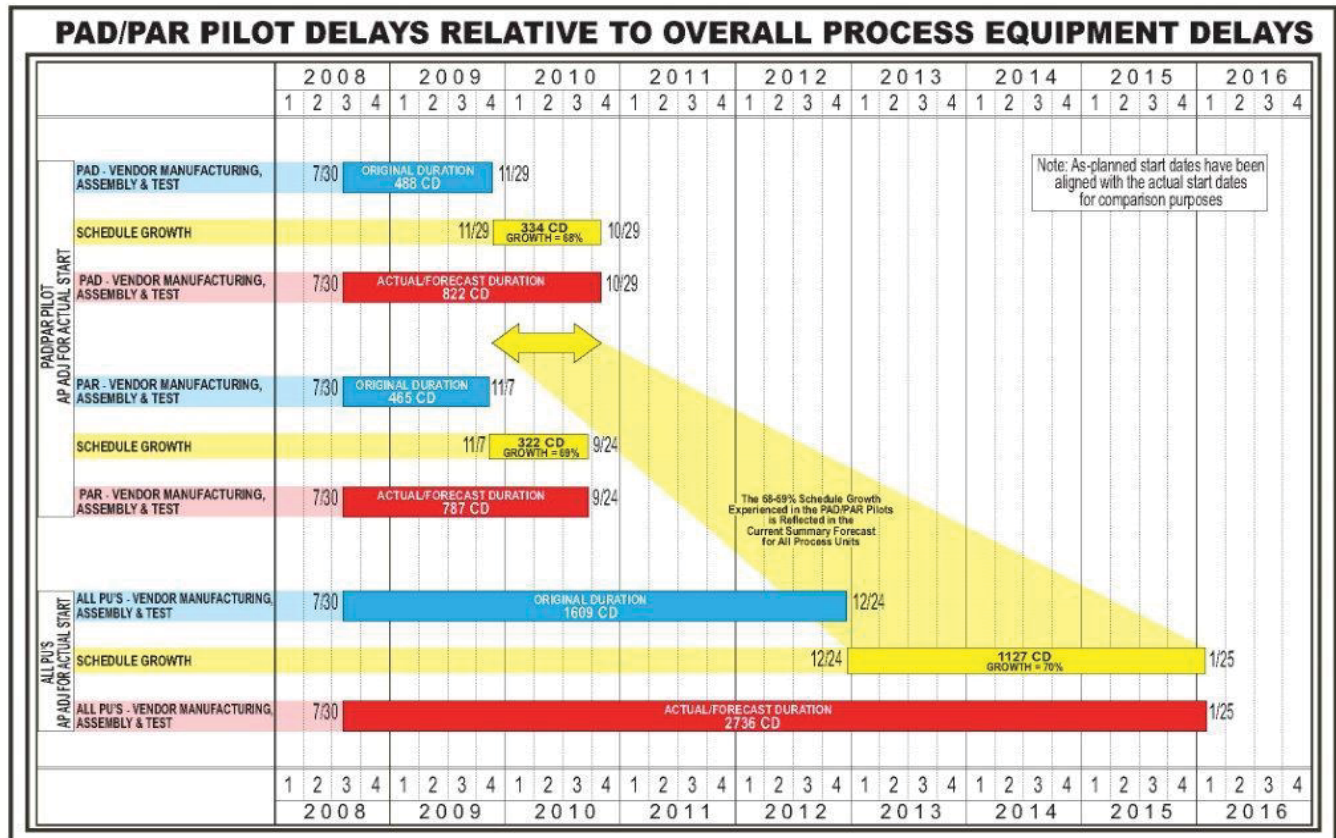
Over half of MOX Services’ added work scope between the 2007 Baseline and the 2012 Rebaseline is due to delays in the process unit procurement cycle. The critical path of the MFFF was controlled by the process units from the 2007 Baseline through the funding constraints applied during the development of the 2012 Rebaseline. MOX Services incurred \$772,497,944 in time-related costs, or Hotel Load, occasioned by the approximately 42 month schedule extension that these delays caused.

As described in Section III.E.1 above, the duration estimates on the PAD and PAR process units in the 2007 Baseline (made without the benefit of pilot procurements) fell far short of their actual durations. The 2007 Baseline estimated that to manufacture, test and ship the PAD unit would take 488 calendar days and the PAR unit would take 465 calendar days. In fact, the as-built durations to complete these processes took 822 and 787 calendar days, respectively. These extended durations constituted nearly a 70% schedule variance.

As with the discrete out-of-scope costs of the process units, the schedule-stretching delays caused by the challenges encountered during the manufacturing, assembly and testing of the process units were a by-product of DOE’s refusal to allow MOX Services to conduct pilot procurements. Had MOX Services been allowed to pilot process units before submitting its Option 1 proposal, it would have known that the estimated process unit procurement cycle durations were unrealistically short. Thus, the resulting Hotel Load costs are “related to” the Russian parallelism requirement and so are explicitly beyond the scope of the Option 1 Contract.

Overall, the out-of-scope schedule growth experienced by the Project on all process units has been remarkably similar to that of the PAD and PAR units. Whereas the 2007 Baseline estimated the duration for all process units to be 1,609 calendar days, this estimate had increased as of the 2012 Rebaseline to 2,736 calendar days – a 70% variance. The following graphic, which adjusts the actual start dates for comparative purposes, illustrates this out-of-scope schedule expansion.

Chart III.4 Pilot Procurement and Overall Process Unit Delays



a. **The Process Units Were on the MFFF Critical Path Throughout the Period of Claimed Hotel Load**

The critical path of a project refers to the “longest chain of interrelated activities in the project schedule,” such that “any delay in completing an item on the critical path delays the entire project.” R. Nash, Jr., and S. Schooner, *The Government Contracts Reference Book*, p. 160 (3d ed. 2007). In terms of the Option 1 Contract, therefore, the critical path refers to scheduled activities that, if delayed, would cause a corresponding delay in delivering the MFFF through cold start-up testing.

From the early days of the U.S. MFFF Project, MOX Services advised DOE that certain process units were on the critical path. In September 2000, MOX Services informed DOE that delays in the delivery of certain equipment “will directly affect the construction schedule critical path.”¹⁰⁷ This document stated that based on the French reference plants’

¹⁰⁷ Letter DCS-DOE-000365 from Ed Brabazon, MFFF Engineering Manager, Duke Cogema Stone & Webster, to James V. Johnson, Technical Manager, DOE (Sept. 11, 2000) at 6 (“Exhibit 37”). In this document, “long lead procurements” were defined as “equipment procurements that, due to the time frame required to design, manufacture and test, the

experience, the procurement of the subject units should begin before construction started, which was then slated for March 21, 2003.¹⁰⁸ The PAD, PAR, and Jar Storage and Handling (“NTM”) process units were among the 60 or so units subject to this recommendation.¹⁰⁹ Later, in a July 2003 presentation to DOE, MOX Services noted that the “fabrication schedule of many units are on the critical path.”¹¹⁰

Beginning in May 2008, the MFFF Monthly Status Reports’ critical path sections consistently highlighted one or more process units as controlling the end date of Option 1. Process units remained in the critical path reports until at least mid-2012 (at which point funding constraints imposed by NNSA started to make critical path analyses impossible). Specifically, the Monthly Status Reports from May 2008 through December 2008 demonstrate that at that time the critical path was controlled by the Homogenization and Pelletizing (“NPG”) process unit.¹¹¹ The reports showed the Sintering Furnace (“PFE”) unit to be critical from January 2009 through January 2010.¹¹² And from February 2010 through May 2012, the reports indicated that the PFE, NTM, NPG and Cladding and Decontamination (“GME”) units, among others, controlled the critical path.¹¹³ Further, the May 2012 Monthly Status Report stated that only 43 of 334 gloveboxes had been received and that “a number of equipment deliveries continue behind contract dates affecting follow-on activities.”¹¹⁴ This Report also stated that “MOX Services continues optimizing startup logic sequences for the equipment delays driving critical path.”¹¹⁵

In addition to the contemporaneous self-reports from MOX Services, a review of the historic scheduling data on the Project demonstrates that the process units were on the critical

equipment would impact the construction schedule if the procurement is not initiated in advance of the construction installation subcontract.” *Id.* at 4.

¹⁰⁸ *Id.* at 5.

¹⁰⁹ *Id.* at Attachment 1.

¹¹⁰ DCS Recommendation, Exhibit 25, at 2.

¹¹¹ See May 2008 Monthly Status Report at 33 of 57 (“Exhibit 38”); Dec. 2008 Monthly Status Report at 31 of 56 (“Exhibit 39”).

¹¹² See January 2009 Monthly Status Report at 32 of 58 (“Exhibit 40”); January 2010 Monthly Status Report at 40 of 67 (“Exhibit 41”).

¹¹³ See February 2010 Monthly Status Report at 38-39 of 69 (“Exhibit 42”); May 2012 Monthly Status Report at 50-51 of 66 (“Exhibit 43”).

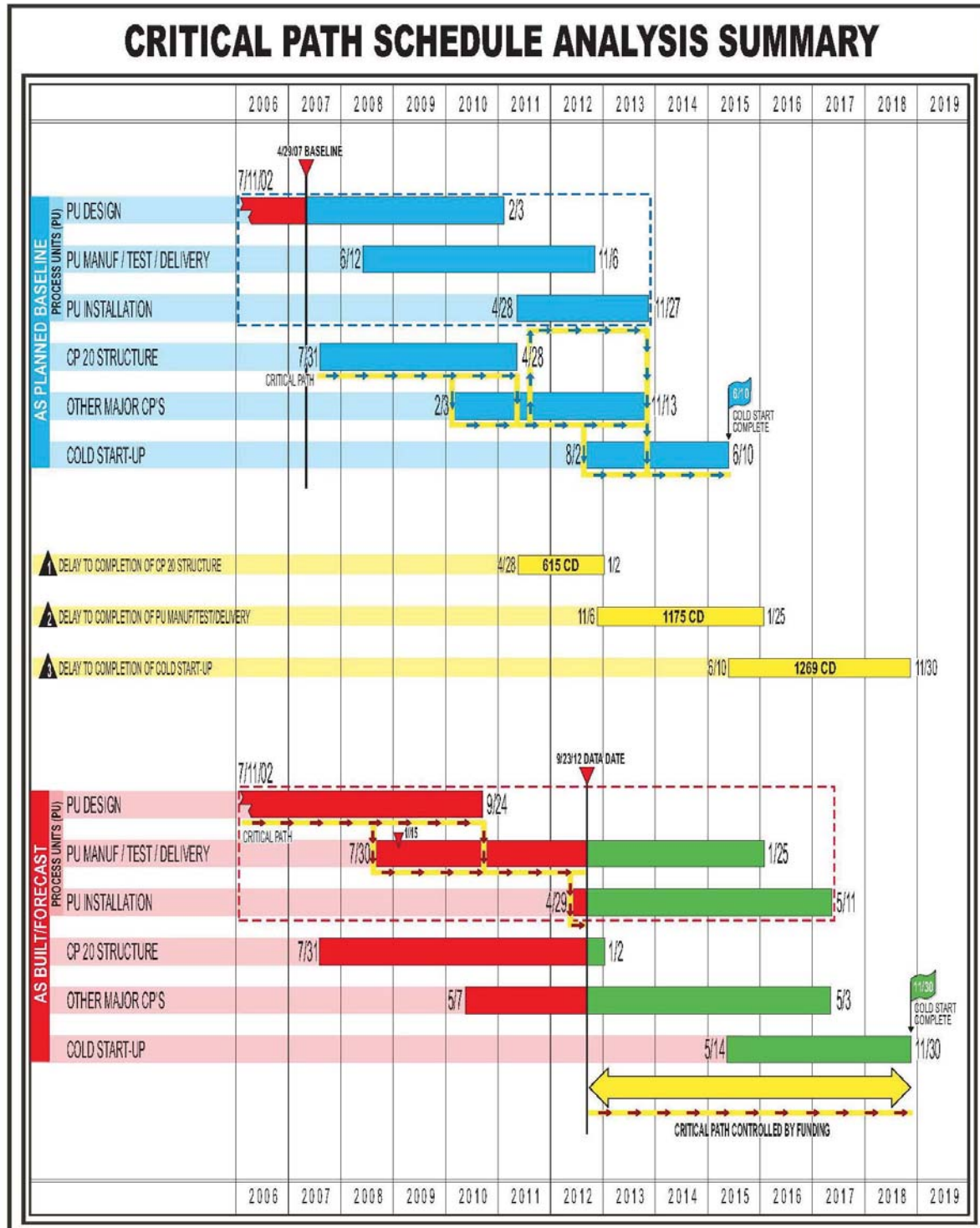
¹¹⁴ May 2012 Monthly Status Report, Exhibit 43, at 5 of 66.

¹¹⁵ *Id.*

path for the entire period addressed here. The early Monthly Status Reports from April 2007 (the first report under the 2007 Baseline) to April 2008 stated that the MFFF concrete structure controlled the critical path.¹¹⁶ In fact, as shown graphically below, the significantly longer delays experienced on the process unit procurements than those on the concrete structure meant that, from the start of the 2007 Baseline period, the process units actually controlled the critical path.

¹¹⁶ See April 2007 Monthly Status Report at 27 of 43 (“Exhibit 44”); April 2008 Monthly Status Report at 33 of 56 (“Exhibit 45”).

Chart III.5 Critical Path Schedule



The “Critical Path Schedule Analysis Summary” shows in blue that the 2007 Baseline predicted that the critical path would be controlled throughout Option 1 by the MFFF structure (the CP 20 concrete structure package, then “other major construction packages,”

and finally, cold start-up). In fact, principally due to the significantly longer delays in process unit manufacturing (1,175 days) than the CP 20 structural package (615 days), the process units actually controlled the critical path from the 2007 Baseline until at least fall 2012. The as-built critical path, in red, shows the critical path controlled initially by the process unit design, and then concurrently by that design and the process unit manufacturing.

MOX Services started the construction of the concrete structure on August 6, 2007, only six days later than scheduled.¹¹⁷ Yet, vendor manufacturing in the normal course (*i.e.*, not counting the piloted units) did not start until January 15, 2009, or 217 days later than its scheduled start in the 2007 Baseline.¹¹⁸ Moreover, emphasizing the process units' early appearance on the critical path, MOX Services experienced significant duration expansion on some process units in the earliest phase of the procurement cycle – design conformance.¹¹⁹ The design conformance on the NTM glovebox unit was scheduled to take MOX Services 3,079 engineering hours to complete over a period of 260 days.¹²⁰ MOX Services actually incurred 18,675 engineering hours in performing design conformance on the NTM. The process started 65 days late and took 372 days longer than planned to complete, and it represented an overall delay of 437 days.¹²¹

¹¹⁷ PRIMAVERA A (data April 29, 2007) (shows “MILESTONE – Begin MOX Bldg Slab PKG 20” scheduled to begin on July 31, 2007) (“Exhibit 46”); PRIMAVERA B (data date January 29, 2012) (shows “Begin Construction – CP 20” to have occurred on August 6, 2007) (“Exhibit 47”).

¹¹⁸ PRIMAVERA C (data date April 29, 2007) (shows “Process Unit Manufacturing - SDK” scheduled to begin on June 12, 2008) (“Exhibit 48”); PRIMAVERA D (data date September 23, 2012) (shows “NBX * GB1000 – Vendor Fab Glovebox” to have occurred on January 15, 2009) (“Exhibit 49”).

¹¹⁹ “Design conformance” refers to the scope of work necessary to review and modify design documents to address changes to issued designs due to safety assessments, DOE technical reviews, and other causes. PCN 04-0074 at 1.13 (“Exhibit 50”).

¹²⁰ The Equipment Group Completion Plan appended to PCN 04-0074, Rv. (July 12, 2005), shows 3079 hours of planned NTM design conformance. *See* Basis of Estimate, MFFF Equipment Group Base Engineering, NTM-JAR Storage & Handling, Work Package 8319.01, .02 and .03, (October 2004) (“NTM Basis of Estimate (October 2004)”) (“Exhibit 51”) at 1. PRIMAVERA E (data date April 29, 2007) (shows “Complete Design Conformance for NTM” scheduled to begin on October 2, 2007, and finish on June 17, 2008 – a duration of 260 days) (“Exhibit 52”).

¹²¹ PRIMAVERA F (data date January 29, 2012) (shows “Str Conform Design CO – NTM” to have begun on December 6, 2007, and to have ended on June 26, 2009) (“Exhibit 53”). The NTM is one of the more complicated process units, consisting of 33 interconnected gloveboxes enclosing dozens of equipment systems. *See* Exhibit 51, NTM Basis of Estimate (October 2004) at 1. But, the great delays experienced in design conformance on this unit

The combination of as-scheduled concrete construction and challenging, delayed process equipment procurement would continue and become more pronounced as the Project progressed. For example, MOX Services completed the first floor concrete slab on February 6, 2009 – only 2 calendar days later than estimated in the 2007 Baseline.¹²² MOX Services started the 3rd floor slab on January 5, 2010 – only 168 calendar days behind schedule.¹²³ During this same period, process unit procurement was significantly delayed. The January 2010 Monthly Status Report included in the Summary Schedule section a forecast of December 18, 2013, for the completion of “Glovebox Fabrication, Assembly/Shipment.”¹²⁴ This forecast represents 531 days of delay when compared to the July 5, 2012 end date for this activity, as shown in the April 2007 Monthly Status Report, which reflects the 2007 Baseline.¹²⁵

By the time of the 2012 Rebaseline, the construction of the concrete structure was scheduled to be complete on January 2, 2013.¹²⁶ While this represented a 616 calendar day delay,¹²⁷ by this point the process unit procurements were delayed 1,175 calendar days and were not estimated for delivery until January 25, 2016.¹²⁸

highlights the difficulty of updating and modifying the French reference plant designs for use in the U.S. MFFF.

¹²² PRIMAVERA G (data date April 29, 2007) (shows “COMPLETE Slab MOX SLAB-ON-GRADE” scheduled to finish on February 4, 2009) (“Exhibit 54”); PRIMAVERA H (data date September 23, 2012) (shows “COMPLETE BMP 1st FL SLAB” to have occurred on February 6, 2009) (“Exhibit 55”).

¹²³ PRIMAVERA I (data date April 29, 2007) (shows “Start Install BMP 3rd Floor” scheduled to begin on June 21, 2009) (“Exhibit 56”); PRIMAVERA J (data date January 29, 2012) (shows “START BMP 3rd FLOOR SLAB” to have occurred on January 5, 2010) (“Exhibit 57”).

¹²⁴ January 2010 Monthly Status Report, Exhibit 41 at 39 of 67.

¹²⁵ See April 2007 Monthly Status Report, Exhibit 44 at 26 of 43.

¹²⁶ PRIMAVERA K (data date September 23, 2012) (shows “COMPLETE CONSTRUCTION RELEASE -3 (Roof All Areas Complete)” scheduled to finish January 2, 2013) (“Exhibit 58”).

¹²⁷ PRIMAVERA L (data date April 29, 2007) (shows “COMPLETE MOX BLDG Roof” scheduled to finish on April 28, 2011) (“Exhibit 59”).

¹²⁸ PRIMAVERA M (data date April 29, 2007) (shows “Available at Site – KLI” scheduled for November 6, 2012) (“Exhibit 60”); PRIMAVERA N (data date September 23, 2012) (shows “KLO – Available for Site (MFFF)” scheduled for January 25, 2016) (“Exhibit 61”).

b. Hotel Load: Translating Schedule Scope Growth into Costs

MOX Services identifies time-related costs as Hotel Load,¹²⁹ and captures this data in its Project Management Control System (“PMCS”). The PMCS complies with the contract and all applicable FAR clauses.¹³⁰ In its Option 1 estimate, MOX Services specified positions that were needed to support various areas of the Project and calculated the number of hours that would be incurred on an annual basis.¹³¹ For example, a Project Controls Manager was included in the estimate to manage and direct all of the functions within the purview of her organization. The estimate for this position was developed by calculating the number of hours that would be incurred over the course of the Project, from October 1, 2006 through CY 2013, which totaled 13,280 hours. These hours were combined with other positions within the Project Controls group. The total estimated hours for this group was 197,690.¹³²

Essentially, Hotel Load costs are incurred to maintain the Project’s ability to perform. While Hotel Load may include some activities that advance the Project by preparing for activities to be performed, Hotel Load generally does not involve activity that demonstrates visible progress toward a deliverable. For purposes of this REA, the Hotel Load cost claim includes general Hotel Load costs and excludes cost accounts specifically related to process units and construction, which have been claimed as discrete items.

On a project with the tremendous scope and complexity of the MFFF, Hotel Load costs can approach \$200 million per year. As shown in the following chart of MFFF Hotel Load, for example, actual Hotel Load costs have ramped up from \$65,717,532 per year in FY07 to \$141,488,442 per year in FY12. According to the 2012 Rebaseline, Hotel Load

¹²⁹ The DOE defines Hotel Loads as a term used to “identify the cost associated with level of effort activities and fixed costs that will be incurred until a given piece of work is complete,” such as direct management and administration costs, and “indirect costs that are not part of direct production activities.” Department of Energy, Risk Management Guide (Jan. 12, 2011) (“Risk Management Guide”) at Attachment 15: Glossary 15-4 (“Exhibit 62”). MOX Services’ estimating approach for Hotel Load is consistent with the methodology described by the DOE in its Cost Estimating Guide. Department of Energy, Cost Estimating Guide, (May 9, 2011) (“Cost Estimating Guide”) at 21 (“Exhibit 63”).

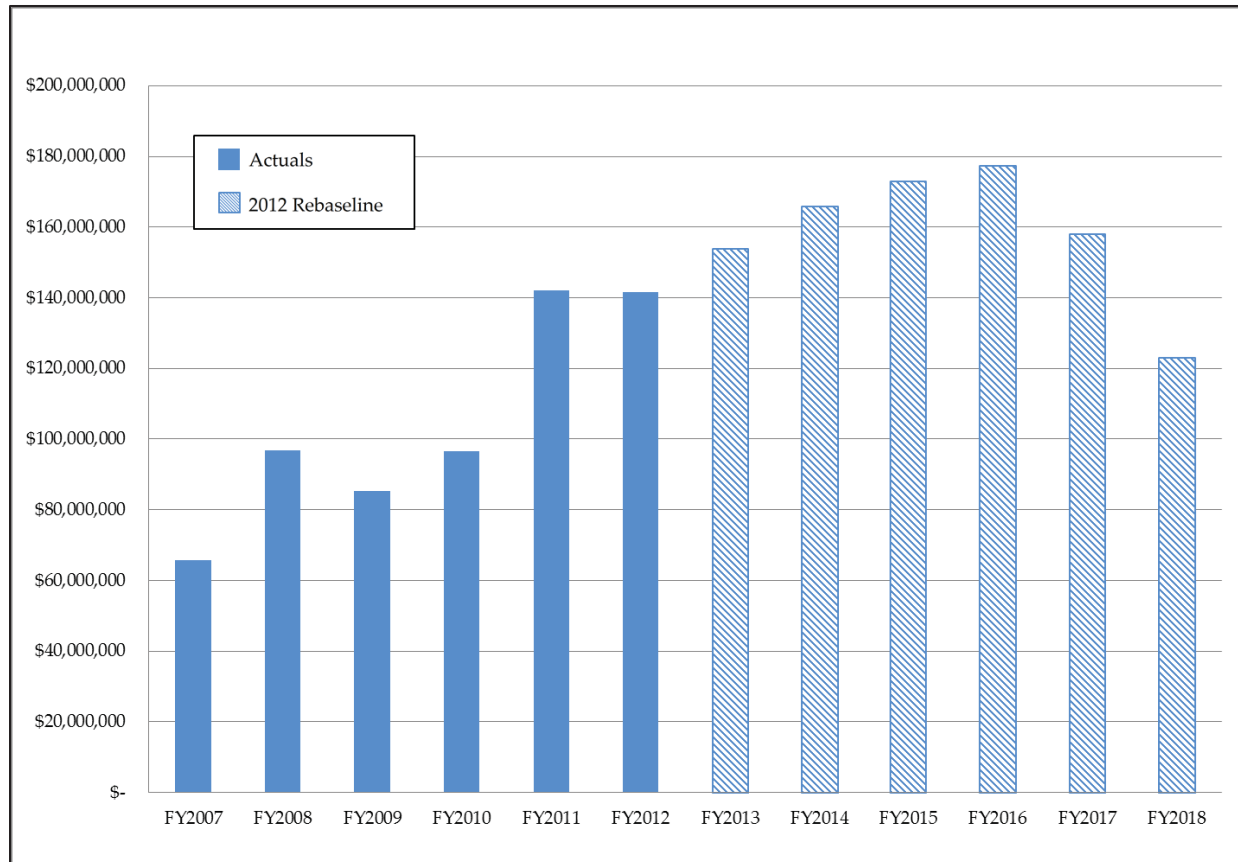
¹³⁰ As detailed in its CASB Disclosure Statement, MOX Services’ financial accounting operations are subject to DCAA review and conform to all GAAP and CASB requirements. *See* Duke Cogema Stone & Webster, Option 1 Proposal (March 15, 2006) (“Option 1 Proposal”) at 3-77 (“Exhibit 64”).

¹³¹ The DOE likewise acknowledges that level-of-effort activities increase Hotel Load costs. *See* Risk Management Guide, Exhibit 64, at 15-4, 15-5.

¹³² Basis of Estimate for Management Area 06, Cost Account 6010 (Feb. 6, 2006) (“Exhibit 65”).

costs are estimated to average about \$160 million per year through FY18. The following chart, compiled from data in the 2012 Rebaseline, shows MOX Services' estimated Hotel Load costs beyond the 2007 Baseline's estimated Project completion date in FY14.

Chart III.6 Hotel Load Over Time



MOX Services' estimated general Hotel Load costs grew \$804,280,495 – from \$799,014,425 to \$1,603,294,920 – between the 2007 Baseline and the 2012 Rebaseline.¹³³ The majority of this cost growth was in Project Management (\$393,718,692), which includes costs for the overall Project management and administrative tasks to support the Option 1 Contract.¹³⁴ This cost growth also includes cost growth in Title III Engineering (\$160,996,840), Temporary Facilities & Services (\$128,689,513), Cold Startup (\$63,901,948), and ES&H Program Management (\$28,987,513). This cost growth does not include \$34.8 million of Hotel Load cost for scope of work performed under the Base Contract or costs borne directly by or passed through to DOE, such as Management Area 90

¹³³ There has been an additional \$37.8 million in Hotel Load cost growth since the 2012 Rebaseline.

¹³⁴ Option 1 Proposal, Exhibit 64, at 1-2 (Cost Proposal).

costs for utilities and local support services at the Savannah River Site.¹³⁵ Cost growth associated with MA 21 (Other Project Costs – Operations Preparation) in the amount of \$29.8 million has also been excluded from the claimed cost growth because it does not exceed the amount incorporated into the Contract in Mod. 162 for unexercised scope. For this REA, the NRC costs also are not being claimed. These adjustments result in cost growth, for which MOX Services is entitled to adjustment of the Incentive Fee Band, in the amount of \$772,497,944.

¹³⁵ Proposal 12-004, Exhibit 9, at WBS Definitions at 0901.

IV. CHANGE IN THE METHOD OF CONSTRUCTION PERFORMANCE

In awarding the Option 1 Contract, NNSA directed MOX Services to serve as a construction manager. In this role, NNSA prohibited MOX Services from self-performing construction; rather, NNSA's performance strategy called for MOX Services to hire fixed-price subcontractors to perform all Project construction. MOX Services based its cost estimates on NNSA's construction performance strategy. Further, MOX Services excluded the risk that NNSA's strategy might fail from its cost estimates and, therefore, from the scope of the Contract.

Ultimately, NNSA abandoned this performance strategy because not enough qualified subcontractors were willing and able to perform fixed-price construction work on this immensely complex, first-of-a-kind facility that was governed by the exacting nuclear standards called for in the Contract. Through Modification 152, NNSA changed the construction performance strategy in two important ways, each of which increased the scope and the cost of work performed by MOX Services.

First, Modification 152 fundamentally altered MOX Services' role on the Project by removing the prohibition on its self-performance of construction scope. No longer limited to the construction manager role, after Modification 152, MOX Services would self-perform construction where doing so would be most cost-effective. This change increased the amount and complexity of MOX Services' work, because now MOX Services would be required directly to coordinate, schedule and supervise enormous amounts of craft labor.

Second, Modification 152 removed the requirement that construction subcontracts be let exclusively on a fixed-price basis whenever practicable. The use of time and materials ("T&M") subcontracts, too, increased the amount and complexity of MOX Services' work. To ensure that the applicable NQA-1 quality standards were met, MOX Services deployed significant Quality Assurance/Quality Control resources to assist its subcontractors.

The government is responsible for increased costs over the 2007 Baseline resulting from NNSA's failed construction performance strategy and subsequent change, estimated to be \$252,204,423 as of the 2012 Rebaseline. As a result, MOX Services is entitled to adjustment to the Incentive Fee Band in that amount and, having performed within the adjusted band, is entitled to incentive fee.

A. Contract Requirements

Throughout Option 1, NNSA has controlled and directed the construction performance strategy to be used by MOX Services. The Contract limited MOX Services' role to that of a construction manager, prohibited MOX Services from performing any construction work with its own workforce, and required competitively bid fixed-price subcontracting to the maximum extent possible. MOX Services, in turn, based its estimated cost on this method of performance and on the assumption that, in accordance with NNSA's strategy, adequate competition from qualified subcontractors would exist to drive down costs.

1. NNSA Required MOX Services to Perform Exclusively as Construction Manager and Prohibited MOX Services from Self-Performing Construction

At definitization, the Contract expressly barred MOX Services from self-performing construction work.¹ Specifically, clause H.7, “Construction Prohibition,” stated that “[n]o construction work shall be awarded to the firm that designs the MOX Fuel Fabrication Facility or its subsidiaries or affiliates.”² The Contract emphasized the Construction Prohibition by providing that it could only be changed “with the approval of the Secretary.”³

For purposes of this clause, the term “construction” was broadly defined to include any activity required to erect and build the permanent plant, warehouse, and administrative facilities necessary to make the building habitable, as well as the systems and utilities needed for the processing systems to function appropriately.⁴

The Construction Prohibition did not extend to construction management.⁵ Instead, in accordance with the SOW, MOX Services would “perform construction management services and ensure the successful completion of functional check-out, and cold start-up of the facility.”⁶ Thus, under NNSA’s strategy MOX Services’ principal undertaking would consist of construction management activities.

2. NNSA Required MOX Services to Utilize Fixed-Price Construction Subcontractors to Achieve Cost Efficiency

In addition to prohibiting MOX Services from self-performing any construction activities on the Project, the SOW required MOX Services to compete the construction subcontracts on a fixed-price basis:

¹ See Exhibit 6, Mod 124, at J.1.40; see also Letter DOE-DCS-001025 from James R. Bieschke, Contracting Officer, DOE, to Larry R. Barnes, President, Duke, COGEMA, Stone and Webster, LLC (July 20, 2005) (“Exhibit 66”) at 2 (“Exercise of Unexercised Segments (Remainder) of Option 1”).

² Exhibit 6, Mod 124, at H.7.

³ *Id.*

⁴ *Id.*

⁵ *Id.* Clause H.7 expressly excluded construction management from the definition of “construction.” It stated, “This construction definition does not apply to construction management. Construction Management activities are not prohibited and may be performed by the prime contractor.”

⁶ Exhibit 6, Mod 124, at J.1.39 (Option 1 SOW “Construction Management Services”).

The Contractor shall not perform any construction with its own forces. All construction activities shall be procured on a competitive fixed-price basis to the maximum extent practicable.⁷

NNSA required the use of fixed-price subcontracting in order to generate competition and control costs.⁸ The Contracting Officer explained that “[t]he prohibition against the prime contractor performing construction was part of the original acquisition strategy” and that the purpose behind this construction performance strategy “was to minimize the government’s risk of cost growth.”⁹ Additionally, NNSA expected that “by competing the construction subcontracts, and awarding as many as possible on a fixed price basis, ... the government would achieve the best prices.”¹⁰

3. MOX Services’ Proposal Contemplated Only a Construction Management Role

MOX Services drafted its Technical and Cost Proposals to comply with the NNSA-directed construction performance strategy, including both the Construction Prohibition and the fixed-price subcontracting requirement.¹¹ MOX Services’ Technical Proposal outlined its construction management role and stated that construction efforts on the Project would be undertaken by fixed-price subcontractors.¹² MOX Services included a basis of estimate for

⁷ Exhibit 6, Mod 124, at J.1.40.

⁸ *See generally* Exhibit 18 (regarding Exercise of Option 1 and listing construction objectives, including procurement of “all construction activities on a competitive fixed-price basis to the maximum extent practicable”); *see also* Exhibit 15 at I.5 (incorporating by reference FAR 52.244-2 and FAR 52.244-5, calling for competition in subcontracting and the Government’s consent to subcontract).

⁹ Exhibit 17, Carol Elliott E-mail to Sue King, Oct. 20, 2008. In fact, the prohibition “was included in most of the acquisition strategy documents. It was also included [in] the action memo signed by the Secretary approving the contract award.” *Id.*

¹⁰ *Id.*

¹¹ Exhibit 64, Option 1 Proposal, Volume I (Technical Approach) at 2-36, 2-37, and 3-13 and Volume II (Cost Proposal - Executive Summary) at i (expecting to manage construction work through competitively awarded fixed price construction subcontracts).

¹² *See id.*, Volume I (Technical Approach) at 2-36, 2-37.

Construction Management that mirrored the work scope contemplated by its Technical Proposal.¹³

a. MOX Services' Construction Management Plan

In its limited role as construction manager, MOX Services was responsible for contracting with and managing subcontractors.¹⁴ MOX Services' Construction Management organization was "[r]esponsible for overall strategic direction, leadership, and integration for all construction site employees, subcontractors, and site activities."¹⁵ MOX Services planned to undertake "effective management and coordination of the large number of onsite contractors and vendors."¹⁶ MOX Services proposed to establish "the overall management and administrative requirements for construction" and to flow down those requirements to subcontractors and sub-tier suppliers.¹⁷ MOX Services also anticipated preparing guidance documents for subcontractors and vendors, specifying the expectations and requirements for communications, reporting, and coordination with other subcontractors.¹⁸ MOX Services would not have primary responsibility for Quality Assurance, but would "oversee and evaluate" subcontractor and supplier QA plans and programs.¹⁹ MOX Services anticipated developing QA/QC procedures and protocols and performing QA audits of suppliers and subcontractors.²⁰

¹³ See *id.*, Volume II (Cost Proposal) at 1-1, 1-2 and Work Breakdown Structure (WBS) Element Definition for Utility Equipment & Piping (Cost Content explained as "Subcontract Effort: All-inclusive, firm fixed price contract for material, fees, and labor and installation costs") and WBS Element Definition for Electrical (Cost Content explained as "Subcontract Effort: All-inclusive, firm fixed price contract for material, fees, and labor and installation costs").

¹⁴ See Exhibit 16, PEP, at ¶ 6.1.3. Incorporated by reference into the Contract, the PEP outlines MOX Services' "Subcontracting and Procurement Strategy." *Id.* As part of this strategy, MOX Services intended to employ subcontractors to serve as general contractors for construction. *Id.* The PEP explains that "[u]nlike a construction manager, a general contractor would execute a significant scope of its assigned work, and perhaps all of it, with its own forces." *Id.*

¹⁵ Exhibit 64, Option 1 Proposal, Volume I (Technical Proposal) at 3-13.

¹⁶ *Id.* at 2-39 and 3-75.

¹⁷ Exhibit 16, PEP, at ¶ 6.1.3.

¹⁸ Exhibit 64, Option 1 Proposal, Volume I (Technical Proposal) at 2-39 and 3-75.

¹⁹ Exhibit 19, BCP #05-011 at 1.

²⁰ *Id.*

b. MOX Services' Construction Subcontracting Plan

MOX Services' role as Construction Manager was reflected throughout its subcontracting plan. MOX Services planned to provide construction management and administration, QA, and related oversight.²¹ Its Construction Area Managers were tasked with managing and maintaining "the integration of all subcontractor activities, ensuring that the work is completed in a safe and efficient manner."²² They would also "monitor subcontractor activities for adherence to cost and schedule baselines" and to "coordinate and oversee all subcontract development, procurement, management of subcontractors, and subcontract closeout."²³ But the primary construction work and its direct supervision, inspection and QA would be the responsibility of the subcontractors themselves.²⁴

MOX Services expected that construction subcontractors, suppliers, and vendors would procure, erect, and install the facilities.²⁵ Its basis of estimate for Construction Management mirrored the work scope contemplated by its Technical Proposal. For example, the cost content included in MOX Services' basis of estimate for piping, electrical, structural, and HVAC was based on the efforts of subcontractors operating under all-inclusive, firm fixed-price contracts for material, fees and labor, and installation.²⁶ Moreover, MOX Services included a list of all planned fixed-price construction subcontracts in Exhibit 2-7 of its Technical Proposal.²⁷

4. NNSA Accepted the Risk that Its Strategy Might Fail

Wary that the complexity of this first-of-a-kind nuclear facility to be built under strict NRC regulations would severely limit the pool of capable subcontractors willing to take on fixed-price subcontracts, MOX Services sought to control the risk inherent in NNSA's chosen strategy. In preparing its cost estimate, MOX Services excluded from the scope of

²¹ See generally Exhibit 64, Option 1 Proposal, Volume I (Technical Proposal) at 2-36 (addressing MOX Services' plan for Construction Management and Administration).

²² *Id.* at 3-13.

²³ *Id.*

²⁴ See *id.* at Volume I (Technical Proposal) at 2-36 (explaining MOX Services' construction subcontract strategy to include awarding competitive subcontracts to construction subcontractors to build the facilities).

²⁵ See *id.*

²⁶ See, e.g., Exhibit 64, Option 1 Proposal, at WBS Element Definition for Utility Equipment & Piping and WBS Element Definition for Electrical.

²⁷ Exhibit 64, Option 1 Proposal, Volume I (Technical Proposal) at 2-37 (providing summary of major subcontracts for MFFF construction).

the Contract the risk that the performance strategy might fail. In its Basis of Estimate, MOX Services notified NNSA that the estimate depended on a sufficient number of capable fixed-price subcontractors materializing:

The estimate assumes an adequate number of suppliers, vendors and subcontractors with NQA-1 programs that have capacity and technical capabilities to support project schedule.²⁸

In addition, MOX Services' cost estimate assumed that subcontractors would bring their mature and compliant nuclear quality assurance programs to the Project.²⁹

This estimate assumes that the sub-contractors and their suppliers will have a compliant QA program which can be verified through audit prior to their initiation of work on the MFFF. Since the subcontractors and suppliers have not been selected and contracted, the effort needed to bring their QA programs to the level of a NQA-1 program is uncertain. Recent DOE project experience at the Hanford Vitrification Plant has indicated that finding qualified suppliers is problematic.³⁰

During the Option 1 proposal evaluation, DOE's Project Controls Manager acknowledged these "key technical assumption(s)" included the assumption "that there are manufacturing vendors with NQA-1 programs to provide adequate competition and scope implementation."³¹

²⁸ Exhibit 19, BCP #05-011, MA 15 Basis of Estimate (pertaining to construction supervision of MFFF, Quality Assurance).

²⁹ *See id.*

³⁰ *Id.*

³¹ DOE report "Technical Input for Cost Analysis" at 28 (July 28, 2006) ("Exhibit 67"). DOE confirmed its assumption of the risk in its paper, "NQA-1, An Overview for Federal Project Directors." DOE's document quotes Federal Project Director, Clay Ramsey:

What we did not allow for was that with the equipment suppliers who advertise that they have a NQA-1 program, those programs have sat on the shelf for many, many years It would quickly become apparent that the suppliers really didn't know what they were doing as far as NQA-1.

Exhibit 36 at 12.

B. Change In Contract Requirements: The NNSA-Directed Construction Performance Strategy Proved Unworkable

NNSA's construction performance strategy failed because it could not be executed without substantial cost increases and unacceptable quality risks. NNSA issued Modification 152 to eliminate the Contract's Construction Prohibition provision, incorporating in its place a "Self Performance" provision, and eliminating the fixed-price subcontract mandate.

1. NNSA's Construction Performance Strategy Failed to Generate Adequate Subcontractor Competition

Despite MOX Services' diligent efforts, willing and capable subcontractors refused to bid on fixed-price contracts at cost-effective rates. On March 14, 2006, MOX Services advertised the structural concrete construction package on the Federal Business Opportunity website as well as the DCS MOX website.³² Throughout the solicitation process, MOX Services' Construction and Procurement team contacted 72 firms, sent the full RFP to eight pre-qualified firms,³³ and responded to 229 bidder questions.³⁴

MOX Services provided prospective structural concrete subcontractors with a detailed scope of work.³⁵ It explained that the structural subcontractor would be responsible for supplying all of the labor, materials, equipment, and services necessary to construct the Project's main concrete structure, and that it must do so on a firm fixed-price basis.³⁶ Fifteen of the firms that expressed an interest in the structural concrete construction opportunity represented that they were pre-qualified for NQA-1 work,³⁷ but only six of them attended the pre-proposal conference, and only one submitted a proposal.³⁸

³² Letter DCS-DOE-002581 from David Stinson, President, Duke Cogema Stone & Webster, to James Bieschke, Office of Acquisition and Assistance, DOE (July 31, 2006) ("DCS July 31, 2006 Letter") (requesting authorization to use a cost plus incentive fee contract for structural concrete construction) ("Exhibit 68").

³³ CP 20 Strategy Rev. 2 ("Exhibit 69").

³⁴ CP 20 Talking Points Rev. 3 ("Exhibit 70").

³⁵ See Section G (Summary of Work For The MOX Fuel Fabrication Building (BMF) Structural Scope of Work) ("Exhibit 71").

³⁶ *Id.* at ¶ 1.1.1.

³⁷ Many of the prospective subcontractors did not have NQA-1 experience, and MOX Services would later discover the limited scope of their qualifications. Some of the first clues of the lack of qualification of prospective subcontractors were in their pricing: they

Although it resulted from a competitive process, the Kiewit Federal Group's ("Kiewit") June 2006 proposal for structural construction of \$393 million was more than double MOX Services' estimate of \$182 million.³⁹ MOX Services analyzed its estimate against Kiewit's proposal⁴⁰ and concluded that the disparity could not be reduced sufficiently to justify award on a fixed-price basis.⁴¹ Comparing its estimate and Kiewit's proposal, 60% of the Project and Project labor were in alignment.⁴² The only areas left that could account for the substantial differences included risk, contingency for unknowns associated with work on a DOE facility, NRC regulations, unstable funding, and escalation.⁴³ The magnitude of these concerns could not be adequately resolved or minimized to any meaningful extent through fixed-price contracting.

2. MOX Services' Continuing Efforts to Execute NNSA's Failed Construction Performance Strategy and MOX Services' Request for Waiver of that Strategy

a. MOX Services sought waiver of the SOW's fixed-price subcontracting requirement

Upon receiving Kiewit's proposal, MOX Services requested DOE's authorization to use a cost plus incentive fee ("CPIF") contract in lieu of a firm fixed-price contract for the

either grossly underestimated the quality requirements or included excessive contingency to compensate for their inexperience.

³⁸ See Exhibit 68, DCS July 31, 2006 Letter. The dearth of qualified subcontractors was well documented in contemporaneous government reports and Peer Reviews. See United States Government Accountability Office, GAO-14-231, Plutonium Disposition Program: DOE Needs to Analyze the Root Causes of Cost Increases and Develop Better Cost Estimates (Feb. 2014) ("GAO-14-231") at Appendix V ("Exhibit 72"). Recognizing the problem and looking ahead, MOX Services even initiated programs with local technical schools and high schools to offer 2-year technical degrees and craft training to mitigate the risk of a craft resource shortage. Exhibit 41, January 2010 Monthly Status Report.

³⁹ Exhibit 68, DCS July 31, 2006 Letter (requesting authorization to use CPIF contract for structural concrete construction).

⁴⁰ See CP 20 Bid Analysis Rev. 2 ("Exhibit 73"); CP 20 Cost Analysis Rev. 5 ("Exhibit 74"); CP 20 Unresolved Pricing Issues ("Exhibit 75"); Exhibit 70, CP 20 Talking Points Rev. 3.

⁴¹ See Exhibit 68, DCS July 31, 2006 Letter.

⁴² *Id.*

⁴³ *Id.*

structural concrete construction package.⁴⁴ In its July 31, 2006 letter, MOX Services explained that using a CPIF type contract would help “significantly reduce the overall cost of this work by essentially removing all contingency ... included in Kiewit’s proposal.”⁴⁵ DOE did not approve MOX Services’ request. Following meetings, clarifications, and scope reductions, MOX Services invited Kiewit to submit a revised proposal. On August 8, 2006, Kiewit submitted a revised proposal for \$267 million, which was \$85 million higher than MOX Services’ estimate for the work.⁴⁶ MOX Services did not award the contract.

MOX Services again tried to stimulate competition to build the concrete structure. It divided the work into three packages and reduced the overall scope of work in an effort to render it more bondable for more firms and to reduce their risk level. The scope reduction included approximately three-quarters of the original structural concrete work, eliminating setting trapped tanks, painting, and the Quality Control inspection requirements (which MOX Services took on as its own responsibility).⁴⁷ MOX Services again advertised the opportunity on the Federal Business Opportunity website and made direct contact with nine firms, sending a new Advance Notice to 45 firms.

MOX Services received two proposals for the first phase of the work. Kiewit bid \$42 million, and Baker Concrete Construction, Inc. (“Baker”) bid \$37.5 million. Baker won the award for the first phase and would go on to win all three phases of the structural work on a fixed-price basis.

Baker completed the first phase but experienced challenges during the second. As a result of Baker’s technical capability problems, MOX Services began expending more time and resources managing the subcontractor. MOX Services also began taking on the subcontractor’s work, including Quality Control. Baker’s contract was de-scoped effective June 2010.⁴⁸ All unfinished scope on the second and third phases was awarded, on a T&M

⁴⁴ *Id.*

⁴⁵ *Id.*

⁴⁶ *See* Kiewit Bid Analysis (“Exhibit 76”).

⁴⁷ MOX Services concluded that construction firms willing and able to bid on work of this magnitude would not have the established capability to perform inspections properly. As such, MOX Services took on the QC responsibility.

⁴⁸ *See* MOX Fuel Fabrication Facility, Project Estimate at Completion (EAC) 2010 (Aug. 2010) at Budget Transfers Since 2009 EAC, Construction Section (“Exhibit 77”); Shaw AREVA MOX Services, LLC, Trend Notice 10-0252, CP-20 (Structural) EAC Associated with Contract for Release 2 and 3A Scope (Nov. 30, 2010) (“Trend No. 10-0252”) (“Exhibit 78”).

basis, to Alberici Constructors, Inc.⁴⁹ The transition to the new installation contractor had to be carefully managed to maintain production and quality. MOX Services continued to apply significant QA and engineering resources to assist its subcontractors.⁵⁰ Other work would also be subcontracted on a T&M basis with increased success.⁵¹

b. MOX Services Sought Waiver of the Contract's Construction Prohibition Clause

Unable to execute the directed construction performance strategy without jeopardizing key aspects of the construction effort, MOX Services sought NNSA's permission to waive another aspect of the strategy, namely the Construction Prohibition clause. In its Option 1 proposal, MOX Services stated that, although it "would be preferable to delete [the Construction Prohibition] clause altogether," it proposed to amend the clause to allow it to perform certain construction efforts, as approved by the Contracting Officer.⁵² DOE denied the request and required MOX Services to proceed based on the unchanged strategy.⁵³

In March 2009, MOX Services again requested that NNSA waive the Construction Prohibition clause, explaining that it would self-perform those particular construction efforts "where subcontracting represents an unacceptable risk to safety, quality and cost effectiveness of the project."⁵⁴ MOX Services explained that self-performance had been used successfully on other major projects, citing the Hanford Waste Treatment Plant, the Tritium Extraction Facility at the Savannah River Site, and the National Ignition Facility at the Lawrence Livermore National Lab.⁵⁵

⁴⁹ See MOX Fuel Fabrication Facility, Project Estimate at Completion (EAC) 2011 (July 2011) at New 2011 EAC Trends ("Exhibit 79"); Exhibit 78, Trend No. 10-0252.

⁵⁰ See MOX Fuel Fabrication Facility, December 2009 Monthly Status Report ("Exhibit 80").

⁵¹ See, e.g., Letter DCS-DOE-003343 from Paul Simons, Director of Procurement and Property, Shaw AREVA MOX Services, LLC, to Carol Elliot, Contracts Specialist, NNSA (Sept. 15, 2009) (Superior Air Handling T&M contract for HVAC ductwork installation) ("September 15 Letter") ("Exhibit 81").

⁵² Draft Option 1 Proposal with Comments, at Cost Proposal 6-4 ("Exhibit 82").

⁵³ See *id.* at 6-2.

⁵⁴ Letter DCS-DOE-003221 from G.W. Painter, Contracts Manager, Shaw AREVA MOX Services, LLC, to Carol Elliott, NNSA Operations Office (March 12, 2009) ("Exhibit 83").

⁵⁵ *Id.*

3. Acknowledging the Failure of Its Construction Performance Strategy, NNSA Issued Modification 152

NNSA ultimately acknowledged the failure of its construction performance strategy. Issued on April 12, 2010, Modification 152 removed the Contract's prohibition on self-performing construction work and the associated requirement to subcontract all construction work on a fixed-price basis.⁵⁶ Fundamentally changing MOX Services' construction manager role to that point, the modification allowed MOX Services to self-perform construction activities when in the best interest of the Project.

C. MOX Services Is Entitled To An Adjustment Of The Incentive Fee Band Under The Contract's Changes Clause Based On NNSA's Change In Construction Performance Strategy

Modification 152 changed NNSA's construction performance strategy, abandoned the basis of MOX Services' cost estimate, and resulted in a change under the Changes clause. Under the Changes clause,⁵⁷ a change in the "plans and specifications or instructions incorporated in the contract" requires the Contracting Officer to make an adjustment in the (i) estimated cost, delivery/completion schedule, or both; (ii) the amount of any fixed fee; and (iii) any other affected terms.⁵⁸ Thus, the Changes clause requires an adjustment of the Incentive Fee Band.

The Boards of Contract Appeals have held that a change in the method of performance is a fee-bearing change under the Changes clause.⁵⁹ In *ITT Federal Services International Corp.*, the ASBCA explained that, even where the deliverable or the nature of the work remained the same, modifications to the method of performing the work are changes within the Changes clause.⁶⁰ Noting that "changes requiring a contractor to use different means or methods of performance than initially contemplated ... routinely fall

⁵⁶ Contract DE-AC02-99CH1088, Modification No. 152 (April 12, 2010) ("Exhibit 84").

⁵⁷ FAR 52.243-2(a) (Alt. III) (Apr 1984).

⁵⁸ FAR 52.243-2(b); *see Space Gateway Support, LLC*, ASBCA Nos. 55608, 55658, 13-1 BCA ¶ 35,232 (Jan. 29, 2013).

⁵⁹ *See, e.g., C.H. Hyperbarics, Inc.*, ASBCA No. 53077 et al, 04-1 BCA ¶ 32568 (March 23, 2004) (finding that where the Government limits or changes a contractor's manner of performance under a contract for design and installation, "the action constitutes a compensable change under the contract").

⁶⁰ ASBCA No. 54001, 06-1 BCA ¶ 33163 (Dec. 29, 2005).

within the ambit of the Changes clause,” the Board held that such a change entitled the contractor to a fee increase.⁶¹

In *ITT*, the Army had awarded cost-plus-fixed-fee contracts for operation and maintenance services on Army bases in Germany. The contractor’s fee was negotiated as a percentage of the estimated costs. During performance, contrary to an express condition of ITT’s proposal, over 200 employees were reclassified under the governing Status of Forces agreement from a “non-technical” to a “technical” status. This subjected ITT for the first time to certain German taxes and made the employees newly ineligible for Army-subsidized benefits.⁶² This reclassification made the contract much more costly and complicated for ITT to perform. Workers became much more difficult and expensive to recruit and retain, and the reclassification greatly increased ITT’s administrative burden.

The Army paid ITT’s increased costs but refused to increase the fee, arguing that the reclassifications involved no new work or extra contract effort.⁶³ The Board disagreed, observing that, among other things, ITT was required to implement extensive changes in its personnel practices and to incur unexpected legal, tax and other expenses.

The Board held that the worker reclassification “changed the basis of the bargain,” which was premised on workers retaining “non-technical” status. Moreover, ITT had “unambiguously conditioned its cost and fee proposal” on that premise, from which the Army had benefitted.⁶⁴ In awarding ITT increased fee, the Board reasoned that ITT’s additional fee entitlement flowed from the contract change and the associated revised risks.⁶⁵

All of the elements that entitled the contractor to additional fee in *ITT* exist here. In both instances, the work product provided to the government did not change. Just as ITT had, MOX Services based its cost estimates on an express presumption that, through no fault of its own, did not last. As in *ITT*, the fee here, including the incentive fee, was negotiated as a percentage of estimated costs.

⁶¹ *Id.* The *ITT Federal Services* decision is notable because the Board borrowed analysis from fixed-price cases and found that a cost reimbursement type contract “does not warrant a different conclusion.” See also *Thomas O’Connor & Co., Inc.*, ASBCA No. 15123, 71-2 BCA ¶ 8926 at 41,500-02 (June 21, 1971) (permitting an increase in the fixed fee on a cost plus fixed fee contract where the change in in the work week caused delay in performance).

⁶² ASBCA No. 54001, 06-1 BCA ¶ 33163 (Dec. 29, 2005).

⁶³ *Id.*

⁶⁴ *Id.*

⁶⁵ *Id.*

Moreover, the impact on MOX Services of NNSA's change in construction performance strategy is directly analogous to the impact the employee reclassification had on ITT. The change in *ITT* augmented the contractor's administrative burden greatly. Instead of being able seamlessly to recruit former Army personnel who could continue to rely on Army-subsidized schooling, medical, recreation, and other benefits, ITT had foisted upon it the difficult and complicated task of recruiting and retaining to an overseas location employees who could not rely on an existing, Americanized infrastructure of services. Further, ITT incurred additional expenses in navigating the German accounting, tax, and human resources rules.

Likewise here, the change in MOX Services' role from construction manager to constructor entailed additional, complex administrative, managerial, quality control, and other responsibilities. No longer could MOX services rely on fixed-price subcontractors to perform, supervise, schedule, coordinate, and inspect the work, secure in the knowledge that, if the governing NQA-1 standards were not met, the subcontractors would be liable. All of these burdens – plus recruiting, training, accounting, human resources, and myriad other functions – now fell squarely on MOX Services. In these circumstances, as in *ITT*, the government is responsible for the changed means of performing the work, not contemplated at the time of contracting, and here this entitles MOX Services to adjustment of the Incentive Fee Band.

In other circumstances, too, the Boards have recognized that where an abandoned methodology served as the basis for an offeror's price proposal, the change triggers the offeror's rights under the Changes clause.⁶⁶ In *Associated Aero Science Laboratories, Inc.*, the Board recognized that the contractor negotiated its fee based on work estimates of direct labor cost and numbers of employees at each of two installations, such that the “shifts from on-station to contractor facility work, and the added responsibilities of supervising a different mix of employees did in fact constitute a change.”⁶⁷ As a result, the Board found that the change entitled the contractor to an equitable adjustment in both cost and fee:

Since the fixed fee was negotiated based upon a pattern of work which was included in the contract by way of estimates of direct labor cost and numbers of employees at each installation, it is our opinion that the drastic shifts from on-station to contractor facility work, and the added responsibilities of supervising a different mix of employees did in fact constitute a change. For this change, appellant is entitled to an equitable adjustment in

⁶⁶ See, e.g., *Environmental Safety Consultants, Inc.*, ASBCA No. 53485, 05-1 BCA ¶ 32903 (March 8, 2005) (granting offeror “costs incurred in performing the work using a method different than what appellant planned in bidding” on the fixed-price contract to remove, transport, and dispose of industrial waste sludge from two lagoons at a Naval facility).

⁶⁷ ASBCA Nos. 15451, 15634, 72-1 BCA ¶ 9293 at 43,059 (Jan. 25, 1972).

the fixed-fee.⁶⁸

Here, NNSA directed the construction performance strategy, requiring MOX Services to perform as the Project's Construction Manager and prohibiting MOX Services from self-performing construction. When its strategy failed, NNSA issued Modification 152 to change the method of performance.

In *Associated*, the change that reduced on-station work and increased work at Associated's facilities required that the contractor recruit, train, and supervise a different class of employee, at a different location, than the parties had bargained for. Here, as in *Associated*, MOX Services' new role required it to take on many administrative, managerial and support functions that the parties had expected would be performed by fixed-price subcontractors. And, as in *Associated*, MOX Services' change from construction manager to constructor constitutes a change in the method of performance for which the government is responsible. As a result, MOX Services is entitled to adjustment of the Incentive Fee Band.

D. Impact

MOX Services incurred increased costs as a result of the change to the construction performance strategy. MOX Services experienced such cost growth in connection with both (i) increased construction management scope and (ii) increased QA/QC resources to provide Quality Assurance support to vendors. The sections that follow detail the full impact of this cost growth.⁶⁹

1. Impact: Construction Management Cost Growth

To accomplish the concrete structure work within its circumscribed role of construction manager, MOX Services had to break up the planned complex construction packages into numerous discrete work elements. MOX Services augmented and reorganized its workforce to undertake increased construction management responsibilities not contemplated by its Option 1 proposal. In this section, MOX Services quantifies its construction management cost growth, as measured by the difference between the 2007 Baseline and 2012 Rebaseline estimates.

As of the 2012 Rebaseline estimate, MOX Services estimated that it would incur \$149,027,763 in cost growth for Construction Management to address the need for more construction management staff to manage the greater quantity of small work packages to complete the construction effort. Additionally, due to the overall delays in the completion of

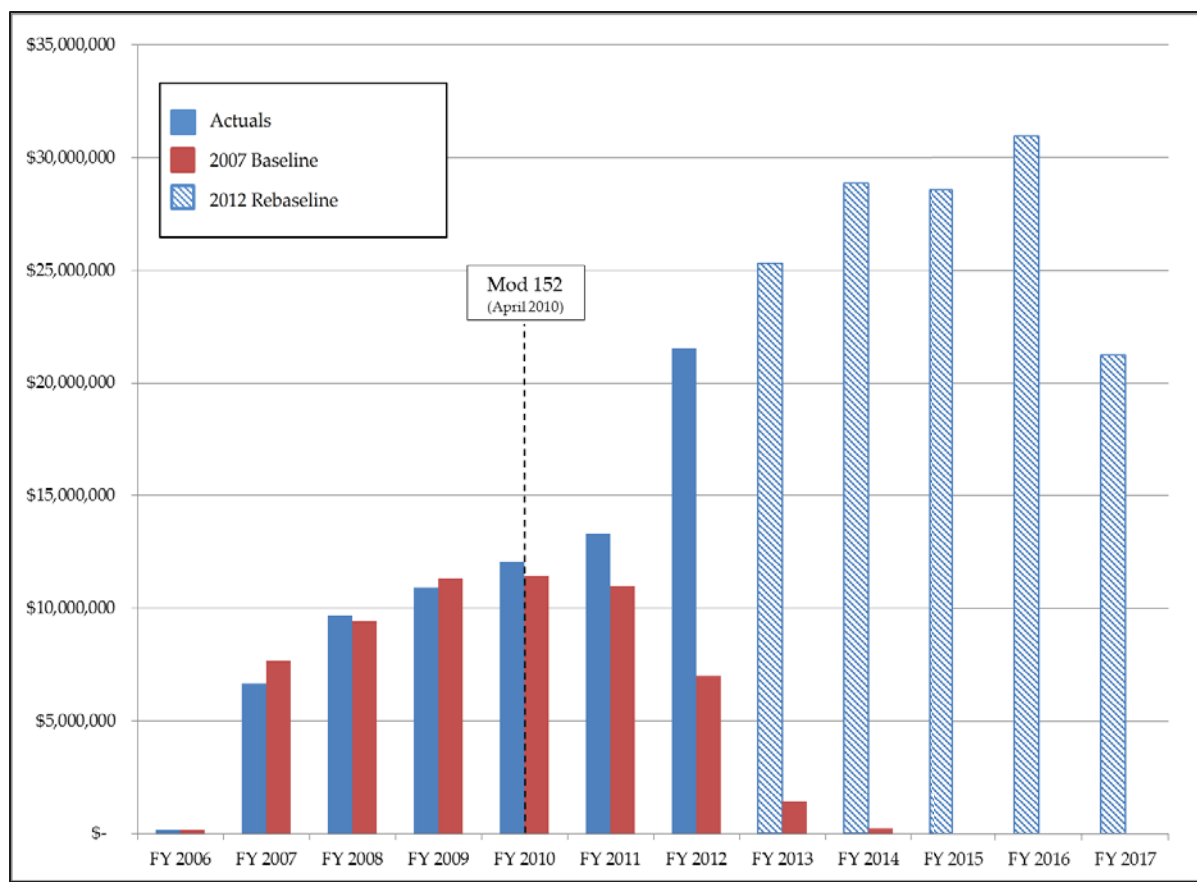
⁶⁸ *Id.*

⁶⁹ MOX Services also experienced cost growth due to a lack of competition among construction subcontractors and inefficiencies caused by lack of qualified vendors. MOX Services has not included these costs as part of this REA.

the Option 1 effort, MOX Services' construction management staff would be required for a longer duration on the Project.⁷⁰

The following chart compares MOX Services' estimated construction management labor costs from the 2007 Baseline against actual such costs and its 2012 Rebaseline estimates of these costs in future years.

⁷⁰ In its September 2008 Monthly Variance Report, MOX Services documented the fact that its own expected staffing levels would increase in order to oversee the execution of Time & Materials subcontracts. *See* Sept. 2008 Monthly Variance Report (Corrective Action under 15.00 and 15.05) ("Exhibit 85").

Chart IIV.1 Construction Management Labor Cost Comparison FY06 – FY17

The red bars represent MOX Services' estimated construction management labor costs in the 2007 Baseline. The blue bars represent MOX Services' actual labor costs through 2012. The blue textured bar represents MOX Services' construction management cost estimate for FY13-FY17 as reflected in the 2012 Rebaseline.

Construction Management is generally considered to be a Hotel Load activity and is estimated as such. Under the 2007 Baseline estimate (red bars), the great majority of the construction effort was expected to be incurred between FY08-FY11, to include scheduled completion of the concrete structure in FY11. The 2007 Baseline estimate anticipated fairly consistent effort in FY08-FY11, followed by steep reductions in FY12 and FY13 as the Project neared completion.

The foregoing chart also demonstrates that, between FY07 and FY10, MOX Services' actual costs (blue bars) were generally consistent with the 2007 Baseline estimate (red bars). After Modification 152, it became increasingly difficult to implement and manage the NNSA-directed construction performance strategy. MOX Services' actual costs began to outpace its estimated costs in FY10, and this difference became more pronounced in FY11 and FY12. Further, the chart shows that the 2012 Rebaseline estimates that the majority of the increased cost will be incurred in FY13-FY17. These higher costs, which average about

\$27 million/year in FY13-FY17, reflect the increased construction management complexity and effort MOX Services will incur in managing craft installers (pipefitters, electricians, HVAC mechanics, etc.) now that the structure is complete.

2. Impact: Quality Assurance / Quality Control Cost Growth Associated with Additional Construction Efforts

MOX Services also experienced a significant change in scope in QA/QC, a critical support function for the Project. The change in MOX Services' QA scope of work and the corresponding cost growth of \$142,986,892 was driven largely by the lack of qualified subcontractors that were available to perform the work and could meet the required NQA-1 nuclear industry standards.⁷¹ It became necessary for MOX Services to embed dedicated MOX Services QA and engineering personnel with suppliers and subcontractors to train personnel and ensure materials and installation met NQA-1 requirements.

Of this \$142,986,892 amount, \$103,176,659 stems from QA effort related to constructing the facility and purchasing and installing commodities, and this amount is discussed here. The remaining amounts (\$25,152,010 related to process units and \$14,658,222 related strictly to Hotel Load QA costs) are discussed in full in REA Section III.E.2 and 3.

The Option 1 Statement of Work required MOX Services to provide construction management services, including "oversight, monitoring and inspection of the vendors to ensure quality assurance requirements are met."⁷² Accordingly, MOX Services' QA budget and staffing plan in the 2007 Baseline assumed that MOX Services' QA role would be one of oversight only and that experienced and qualified subcontractors capable of performing work under NQA-1 standards would be available.⁷³ The MOX Services QA group was responsible for maintaining the MOX Project Quality Assurance Plan, which met the NRC's federal regulatory requirements.⁷⁴ The standards contained in the MOX QA plan were to be flowed

⁷¹ Root Cause Analysis of Cost Increases 2-20 (2014) (stating that "[t]he atrophy of the US nuclear industry affected the availability of qualified and experienced staff, as well as the nuclear and NQA-1 supply chain"), Exhibit 35; U.S. Gov't Accountability Office, Rep. No. GAO-14-231, Plutonium Disposition Program: DOE Needs to Analyze the Root Causes of Cost Increases and Develop Better Cost Estimates 20 (2014), Exhibit 72.

⁷² Letter DCS-DOE-003712 from Robert Walter, Senior Contracts Administrator, Shaw AREVA MOX Services, LLC, to Robert Swett, NNSA (Feb. 18, 2011) (REA 10-022 QA/QC and NQA-1 Vendor Support at 1) ("Exhibit 86").

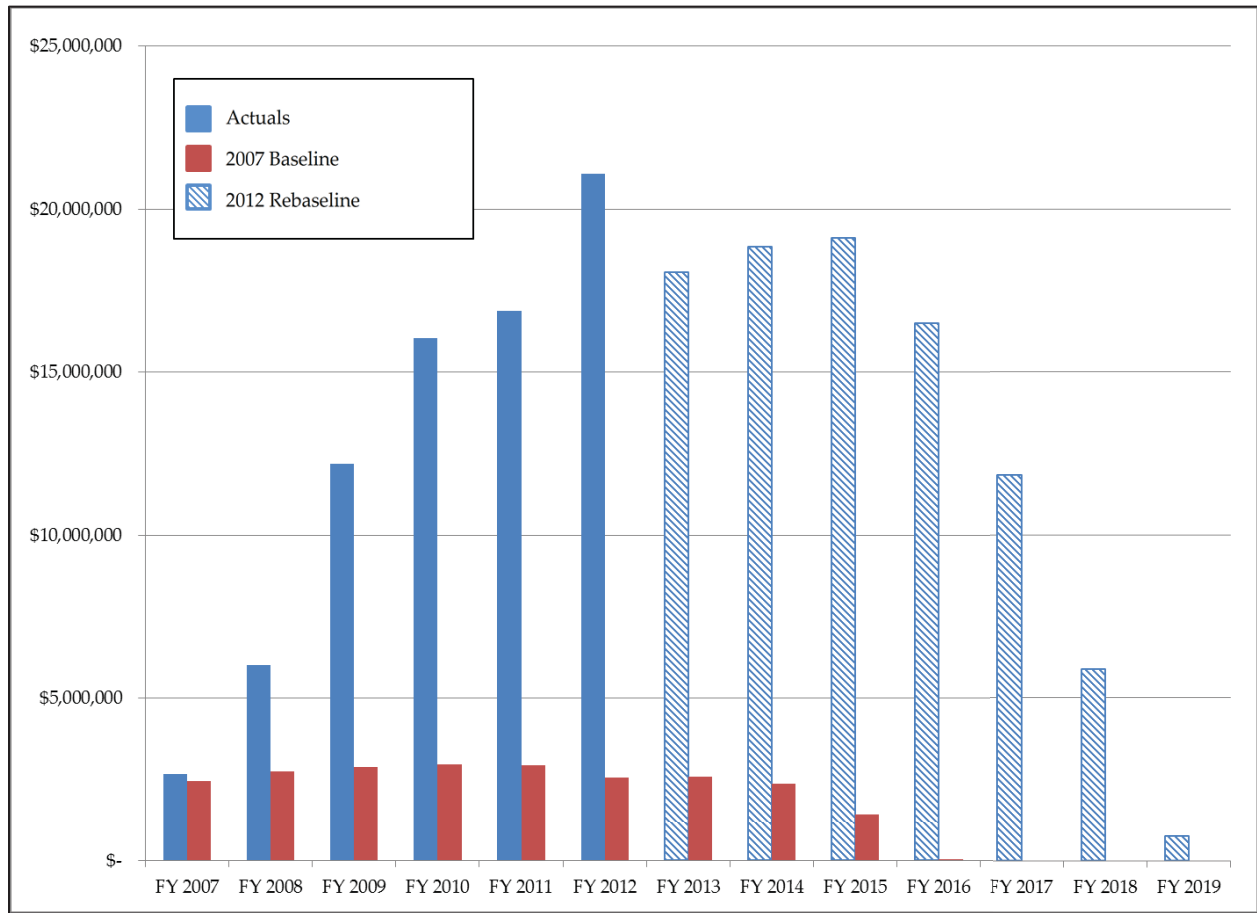
⁷³ MOX Fuel Fabrication Facility, PCN 10-0346, 2010 EAC: MA 19 Quality Assurance/Quality Control (Nov. 29, 2010) at 1 ("Exhibit 87").

⁷⁴ Exhibit 64, Option 1 Proposal, Volume 1 (Technical Proposal) at 2-80 (addressing at ¶ 2.5.3 Quality Assurance (QA)).

down to the subcontractors and vendors, which were to develop and implement their own QA programs under the watch of the MOX Services QA organization.⁷⁵

It became clear during the subcontracting process, however, that capable subcontractors were not available in sufficient numbers to provide the required products and services. Very few companies were capable or willing to accept the QA requirements specified by MOX Services in its bid packages. As a result, MOX Services undertook a program mitigation initiative of building and staffing its own QA organization with the appropriate resources to perform the QA functions required to meet NRC standards. This additional scope led to significant cost growth within QA functions. The significant variance between the 2007 Baseline QA estimate and the actual QA work performed and estimated to be performed in the 2012 Rebaseline is illustrated in the following chart.

Chart IIV.2 Quality Assurance Cost Comparison FY07-FY19



In its 2007 Baseline (red bars), MOX Services estimated that it would incur \$23,023,054 in QA-related costs through FY16. This cost and staffing plan generally reflects a consistent level of effort support and limited oversight throughout the contract performance

⁷⁵ *Id.*

period. Through FY12, MOX Services had already incurred approximately \$75 million in QA costs (blue bars), over three times the original budget that assumed MOX Services would be performing QA functions in an oversight role. MOX Services expected QA costs to be significantly higher in FY13 than originally planned (blue textured bar) due to the continued impact of NNSA's scope change.

V. MOX SERVICES IS ENTITLED TO ADJUSTMENT OF THE INCENTIVE FEE BAND BASED ON INCREASED MOX FACILITY CONSTRUCTION COSTS FOR WHICH THE GOVERNMENT IS RESPONSIBLE

As of the 2012 Rebaseline, MOX Services estimated that the Project would experience \$994,317,246 in construction related cost growth over the 2007 Baseline estimates, including \$257,220,550 in additional bulk commodity, mechanical equipment, and materials purchasing costs; \$679,098,562 in associated increased installation costs¹; and \$57,998,135 in associated increased Title III Engineering costs.²

MOX Services is entitled to an adjustment to the Incentive Fee Band for the Project, adding the entire \$993,017,315 of estimated cost growth, under the seminal case of *H.K. Ferguson Company*, ASBCA No. 2826, Mar. 29, 1957, 57-1 BCA ¶ 1293. *Ferguson* stands for the proposition that when the scope of work on a cost-type contract is stated in very general terms, it is appropriate to look to the contract's negotiated estimated cost to determine what work was contemplated by the parties. The *Ferguson* methodology is especially apt where, as here, extensive design evolution after the estimated costs are set causes the work the contractor actually performs to materially exceed the amount and character of the work contemplated by the contract.³ *Id.* at 22.

The *Ferguson* Board observed that, for budgetary and Antideficiency Act purposes, “[t]here is a close relation between the work required by the contract and the estimated cost.” *Id.* at 21. This is so because to “say that the scope of the contract includes a substantial amount of work that was not taken into account in determining the estimated cost is to say that the contract was entered into in violation of law.” *Id.*

¹ As used here, “installation costs” refers to cost elements such as craft labor, supervision labor, equipment costs and miscellaneous materials not captured in “materials” cost accounts.

² Construction cost growth captured here does not include the following: (1) cost growth in MA 17 related to process units (claimed separately in REA Section III); (2) increased construction management and quality assurance costs due to the change in performance strategy (claimed in REA Section IV); and (3) additional engineering costs under the Base Contract (not claimed in this REA).

³ It is appropriate to look to the 2007 Baseline's estimated negotiated cost for Project construction (MA 17) – \$1.06 billion – to determine the work the parties contemplated as within Option 1. The difference between the 2007 Baseline and the 2012 Rebaseline estimates accurately reflects the difference between the parties' contemplation of the work included in Option 1 and the amount and character of the work MOX Services actually performed. *See Ferguson*, 57-1 BCA ¶ 1293 at 22.

Applying *Ferguson*'s time-tested construct here,⁴ it is far from enough to say that the Changes clause is not implicated because the original purpose of the MFFF has not changed. Although the purpose of the Project has always been to transform Plutonium 239 into mixed oxide fuel to be irradiated in nuclear reactors, DOE directed MOX Services to estimate first and design later for Option 1. The result has been, among other things, substantial increases in MFFF construction costs over the estimates supporting the 2007 Baseline. Under *Ferguson*, the government is responsible for these added costs, and, as such, under the Contract, MOX Services is entitled to an adjustment to the Incentive Fee Band in the amount of those costs.

A. The MFFF Situation Is Nearly Identical To That Explored In *H.K. Ferguson Company*

Ferguson addressed a request for equitable adjustment in a situation that is astonishingly similar to the one presented here.⁵ *Ferguson* concerned the contractor's entitlement to fee on a design-build contract for a first-of-a-kind facility involving extremely dangerous materials that required many complex safety systems, and where the designs were evolving concurrently with construction. On behalf of the Chemical Corps, the Corps of Engineers procured the cost-plus-fixed-fee contract under which Ferguson would design, engineer, and serve as the construction manager for a facility in which bacterial agents for military use would be developed and manufactured. *Id.* at 1. In addition to designing and building the facility, the contractor was responsible for procuring and installing the process equipment that was being designed by the Chemical Corps. *Id.* at 3-4.

At the time of contracting, the Chemical Corps either had not completed the process equipment designs or the designs were classified. In either case, the designs were unknown to the Corps of Engineers and Ferguson during contract negotiations.⁶ *Id.* at 5. The Chemical Corps' urgent need for the facility required that construction proceed concurrently with design. *Id.* at 6. It was only during contract performance that the facility's true

⁴ Although issued over 50 years ago, *Ferguson* has never been overruled, and the case is favorably discussed in its own subsection of Prof. Ralph Nash's authoritative *Government Contract Changes* treatise. See Ralph C. Nash & Steven W. Feldman, *Government Contract Changes* § 8.4 ("Cost-Reimbursement Contracts: Defining a 'Change'") (Thompson Reuters June 2014).

⁵ The similarities extend all the way to underestimated costs of constructing gloveboxes, or, in *Ferguson*'s terms, "reyneir chambers," to the government's changing specifications. *Ferguson*, 57-1 BCA ¶ 1293 at 10-11. The project in *Ferguson* required the construction of 300 of these "highly complex" reyneir chambers, each taking at least five months to make, through which scientists could perform bacterial warfare experiments.

⁶ Following contract negotiations, Ferguson's employees received security clearances that allowed them access to the process equipment designs as they were completed. *Ferguson*, 57-1 BCA ¶ 1293 at 5.

complexity came to light. *Id.* at 4. Ferguson’s fee was negotiated based on the estimated costs and schedule of the facility. *Id.* at 5. The dispute over Ferguson’s fee arose when it became apparent that the facility would cost twice as much and its construction would take three times as long as the parties initially anticipated. *Id.* at 1.

In these circumstances, the *Ferguson* panel rejected the government’s contention that, because the general description of the facility and its purposes had not changed, there had been no fee-bearing changes under the Changes clause. Rather, the Board held that Ferguson was entitled to additional fee on the “increased cost resulting from changes increasing the amount and character of the work.” *Id.* at 25.

B. Like The Project In *Ferguson*, The MFFF Has Unprecedented Features And Evolving Designs

Ferguson noted that, although the mission of the project did not change, “major changes in cost” were incurred due to the “unprecedented features” of the facility and due to the project’s execution strategy, where “construction [was] concurrent with design and unpredictable problems ... developed as the technical requirements were adapted to the physical conditions and which were not obvious to those responsible for the original cost estimates.” *Id.* at 6. Referring to the classified nature of much of the technology deployed on the project, the Board noted that the deficient cost estimates were “due to ignorance of and the secrecy clothing the technical aspects of the basic process involved.” *Id.*

Likewise, here, the “unprecedented features” of the Project are evident. For the first time ever, the Project combines into a single facility two separate and highly complex processes: (1) aqueous polishing, to remove impurities from radioactive material, and (2) MOX fuel fabrication, to mix plutonium with uranium oxide to form MOX fuel pellets and combine them into nuclear reactor fuel assemblies. Moreover, no other facility in the world conducts these processes on weapons-grade plutonium, much less do so within the strictures of the governing NRC regulations.

Also as in *Ferguson*, major design work has proceeded concurrently with the construction of the MFFF structure and the procurement of process equipment. The Project Execution Plan, which is part of the Option 1 Contract and was contemporaneous with the 2007 Baseline, stated that the target date to “Complete [Manufacturing Design Group] Design” was November 17, 2008 – 19 months later,⁷ and to “Complete Facility Design” was February 29, 2010 – almost three years after DOE’s Critical Decision 2/3 approval.⁸

The Root Cause Analysis repeatedly emphasized that the cost increases and schedule delays were caused not by failures on the part of MOX Services but by the decision to

⁷ This process unit design work did not even include vendors’ fabrication drawing work, which would come later.

⁸ PEP, Exhibit 16, at 25.

approve the performance baseline and the start of construction when the designs' immaturity could not support accurate estimates. Noting the "inherent risks in proceeding with nuclear construction at the early stages of design completion," the RCA remarked that the estimates supporting the CD-2/3 approval were over a year old by that point and "were based on a level of design that would only support a conceptual level estimate."⁹ Analyzing the history of the Project up to May 2014, the RCA calculated that the design progress was "approximately 35 to 40 percent at the time that the estimate was prepared and approximately 45 to 50 percent at the time that construction started."¹⁰

C. Like The Project In *Ferguson*, The Government Was Responsible For The Option 1 Underestimates

Having established that the Project set the performance baseline and started construction before the parties had a solid understanding of the resources and time that would be required to build the facility, the question becomes "Why?" or, more specifically, "Who was responsible for the systematic underestimates?"

Here, as in *Ferguson*, the responsibility lies squarely with the government, and thus MOX Services is entitled to an adjustment to the Incentive Fee Band based on the additional costs. Due to external political factors, DOE forced MOX Services to estimate the Option 1 costs before the designs were sufficiently mature to support accurate estimates.¹¹

1. 2002: South Carolina resisted accepting Plutonium 239 at the Savannah River Site

The relationship between DOE and the State of South Carolina regarding the State's acceptance of weapons-grade plutonium has long been contentious, and, ultimately, this dynamic drove DOE to rush MOX Services to create and submit Option 1 estimates. South Carolina allowed DOE to temporarily store Plutonium 239 at the Savannah River Site only

⁹ RCA, Exhibit 35, at 2-11.

¹⁰ *Id.*

¹¹ MOX Services does not blame DOE for directing MOX Services to prepare and submit Option 1 estimates before there was a solid design basis for them. Rather, MOX Services acknowledges that DOE was in a very difficult political bind and likely had its hand forced by other entities. Even taking this as true, however, does not absolve DOE from liability to rebaseline the Project and to pay MOX Services incentive fees based on the resulting cost increases over the insufficient cost estimates. In this regard, DOE is in a similar posture as the Corps of Engineers was in *Ferguson*. There, the Corps of Engineers was the contracting agency, but the Chemical Corps was the agency that caused construction to begin before the designs were sufficiently developed. So too here, DOE must adjust the Incentive Fee Band even if political circumstances beyond its control forced DOE to direct MOX Services to submit estimates before the designs were ready.

on the condition that DOE have a plan for its disposition, such as processing it into MOX fuel at the Site.

Although DOE and MOX Services entered into the base contract in 1999, it was not until January 23, 2002, that DOE supposedly committed to MOX as its disposition strategy under PMDA.¹² Soon thereafter, on April 11, 2002, DOE announced that it would begin shipping weapons-grade plutonium to the Savannah River Site to be stored until the MFFF was able to process it.¹³ South Carolina wanted to ensure, through a court-recognized consent decree, that DOE would meet its stated time frame for either processing this dangerous material into MOX fuel or shipping it back out of the State. Essentially, South Carolina would agree to accept the Plutonium 239 in exchange for the economic benefit of having a multi-billion dollar facility built and operating in its State.¹⁴ DOE rejected this proposal.¹⁵

A week after DOE's announcement that it would dispose of the plutonium using the MOX process, however, DOE issued an official "Record of Decision" that stated plutonium would be shipped to the Savannah River Site, but that no final decision had been made regarding whether to implement the MOX fuel disposition alternative. *See* 67 Fed. Reg. 19432, 19432 (April 19, 2002). Feeling deceived by DOE's earlier announcement that the MOX solution was a certainty, South Carolina took steps to block the plutonium shipments. First, South Carolina governor Jim Hodges ordered multiple state law enforcement agencies to conduct a joint exercise on April 22, 2002, to prepare to blockade the federal shipments of plutonium into the state.¹⁶ Second, on May 1, 2002, South Carolina filed suit in federal district court to block the shipments. *See Hodges v. Abraham*, 300 F.3d 432, 442 (4th Cir. 2002).

While South Carolina's court challenge was denied (*id.* at 449), it spurred Congress to pressure DOE to make good on its promise to move forward with the MFFF. On May 1, 2002, the South Carolina congressional delegation introduced legislation that would require DOE to pay South Carolina \$1,000,000 for every day beyond January 1, 2017, that the MOX facility was late in processing certain targeted amounts of plutonium into MOX fuel.¹⁷ In

¹² DOE Jan 23, 2002 Press Release ("Exhibit 88").

¹³ DOE Timeline, April 15, 2002 ("Exhibit 89").

¹⁴ *Id.* at April 11-12, 2002.

¹⁵ *Id.*

¹⁶ Savannah Morning News, "Plutonium Blockade Exercises Scheduled for Monday" (April 21, 2002) ("Exhibit 90").

¹⁷ DOE Timeline, May 2, 2002; 50 U.S.C. § 2566(c), (d) (enacted December 2, 2002), Exhibit 89.

recognition of the bargain between South Carolina and the federal government, the statute termed these payments “Economic and impact assistance.” 50 U.S.C. § 2566(d).

2. 2003-2005: Inability of United States and Russia to Agree to a Liability Protocol and DOE’s Response

Having reached a détente with South Carolina, DOE quickly found itself in a difficult political position. In July 2003, the liability protocol under which U.S. companies had provided technical support to Russia’s plutonium disposition program expired.¹⁸ The countries were unable to reach agreement on a new protocol.¹⁹ Due to the PMDA’s requirement that the countries’ disposition programs proceed in rough parallel, in February 2004, the delay in Russia’s progress caused DOE to announce a one-year delay in the planned start of U.S. MFFF construction, from May 2004 to May 2005.²⁰

As the delay in agreeing to a new liability protocol dragged on, the political position of the State of South Carolina became stronger. The State could credibly point out that in 2002 it had fought to avoid the present scenario in which it would be left holding Plutonium 239 for an indefinite period with no prospect of the U.S. MFFF being built. The “Economic and impact assistance” provision of 50 U.S.C. § 2566 loomed, and, as the liability protocol stalemate wore on, the political ability of South Carolina’s congressional delegation to fast-track MFFF construction grew.

In this interim, with the future of the MFFF unknown, DOE moved to focus MOX Services’ efforts exclusively on producing a licensable design and to scale back MOX Services’ work. While completing a design the NRC would license may have been reasonable in the circumstances, DOE’s channeling of MOX Services’ design work in this way hampered its ability to produce accurate cost and schedule estimates.

- In 2003, DOE began to refuse MOX Services’ requests to conduct procurements for fear that Russia would believe that the United States was willing to de-link its commitment to reducing its plutonium stockpile from that of Russia.²¹ This restriction persisted until MOX Services submitted its

¹⁸ Sen. Domenici Press Release, July 19, 2005 (“Exhibit 91”).

¹⁹ *Id.*

²⁰ *Id.*

²¹ See Exhibit 24, Letter DCS-DOE-001103 from T.E. Touchstone, Deputy Project Manager, Duke Cogema Stone & Webster, to Patrick Rhoads, MOX Fuel Program Manager, DOE (Sept. 18, 2003); July 2004 MOX Fuel Project Status Report, p. 7 of 181 (“Exhibit 92”).

Option 1 proposal, and it hampered MOX Services' ability to access vendor information to support its estimating activity.²²

- In April 2004, DOE directed MOX Services to plan for a delay in the start of construction and to scale back design work.²³ In July 2004, DOE further directed MOX Services to “produc[e] a licensable design by the end of 2004,” and to “terminat[e] all non-essential work” not focused on that goal.²⁴
- DOE began to limit funding to the MFFF, such that in July 2004 MOX Services reported that it had incurred more expenses than there were funds allocated to the Project.²⁵
- In July 2004, DOE instituted a hiring freeze on MOX Services, including disallowing MOX Services to backfill vacant positions.²⁶
- In January 2005, DOE notified MOX Services that it had slashed MOX Services' operating funds for FY 2005 from a projected \$77.7 million to \$48 million. DOE then set priorities for the year that included delaying several activities until FY 2006 and focusing FY 2005 operating expenses on licensing activities.²⁷

All of the foregoing DOE-imposed restrictions on MOX Services diverted MOX Services away from design work necessary to prepare accurate estimates.

²² See, e.g., July 2004 MOX Fuel Project Status Report, Exhibit 92, p. 7 of 181.

²³ April 2004 MOX Fuel Project Report, p. 10 (“Exhibit 93”).

²⁴ July 22, 2004 PowerPoint, p. 26 (“Exhibit 94”).

²⁵ See Letter DCS-DOE-001741 from Naresh Jain, Director of Procurement, DCS, to David Hess, Contracting Officer, DOE (July 22, 2004) (“Exhibit 95”).

²⁶ See Letter DOE-DCS-000810 from James Bieschke, Director Special Programs Division, DOE, to L.R. Barnes, President and COO, Duke Cogema Stone & Webster, LLC (July 2, 2004) (“Exhibit 96”).

²⁷ See Letter DOE-DCS-000891 from James Bieschke, Director Special Programs Division, DOE, to L.R. Barnes, President and COO, Duke Cogema Stone & Webster, LLC (Jan. 7, 2005) (“Exhibit 97”).

3. July 2005 – March 2006: The U.S. and Russia Agreed to a Liability Protocol, and DOE Pressured MOX Services to Submit Its Option 1 Proposal

On July 19, 2005, after well over two years' delay, the United States and Russia agreed to a liability protocol.²⁸ This was more than three years after the spring 2002 stand-off between the State of South Carolina and the federal government over the State's receipt of Plutonium 239, and South Carolina was eager finally to receive its benefit of the bargain – the beginning of MFFF construction.

The day after the liability protocol was adopted, DOE notified MOX Services that it would exercise Option 1 of the MFFF Contract.²⁹ After hamstringing MOX Services' estimating efforts until the liability protocol was settled, in its notification letter, DOE directed MOX Services to submit a technical and cost proposal for Option 1 by November 1, 2005.

In reply, MOX Services informed DOE that it would not be able to submit an Option 1 proposal until January 2006, a supposed delay that NNSA found "not acceptable."³⁰ NNSA again instructed MOX Services to submit its proposal by November 1, 2005, and also to provide NNSA with weekly updates on its progress.³¹ In doing so, NNSA made clear that external budgetary pressures, and not the best interests of the Project, drove its dictated schedule. NNSA explained that among its reasons for demanding the Option 1 proposal so soon was to remain "consistent with ... the President's fiscal year 2006 budget request to Congress."³² NNSA warned MOX Services that meeting the November 1, 2005 deadline was necessary to "efforts to maintain funding for the MOX FFF project."³³

²⁸ Sen. Domenici Press Release, Exhibit 91. In March 2005, MOX Services had received approval from the NRC to begin construction.

²⁹ See Exercise of Unexercised Segments (Remainder) of Option 1, Exhibit 66.

³⁰ See Letter DOE-DCS-001040 from Martin Newdorf, Federal Project Director, NNSA, to L.R. Barnes, President and COO, Duke Cogema Stone & Webster, LLC (Aug. 1, 2005) ("Exhibit 98").

³¹ *Id.*

³² *Id.*

³³ *Id.*

Three days later, MOX Services provided a plan to support structural construction start by May 2006 without shortcutting the estimating process.³⁴ MOX Services listed several reasons why preparing reasonably accurate cost estimates by the proposal date was unrealistic under the circumstances, including the following: (1) changes in funding profiles had delayed MOX Services' ability to produce the "extremely important ... highest confidence cost estimates"; (2) MOX Services needed more time to add detail and content to preliminary estimates in order to support DOE's and DCAA's "timely review and approval of cost proposals" and to incorporate the greater amount of available design information; and (3) "[d]ue to DOE restrictions against vendor interactions, the existing cost estimates reflect little vendor pricing."³⁵ MOX Services concluded:

[T]he work required to develop high confidence cost estimates in a form suitable for baselining the project and for submitting a compliant cost proposal added to the work anticipated to resource-load and manipulate/iterate the integrated cost project schedule to meet the annual funding constraints cannot be accomplished by 01 November 2005.³⁶

DOE and MOX Services exchanged a second set of contentious letters on the scheduling of MOX Services' Option 1 estimates on August 12 and August 18, 2005, respectively. DOE called MOX Services' inability to submit an Option 1 proposal on DOE's schedule "non-responsive" and "not acceptable," and the Agency repeated its direction to MOX Services to provide an Option 1 proposal by November 1, 2005.³⁷ Again, DOE explained that the budgeting cycle drove the agency to rush MOX Services' Option 1 proposal, and again DOE threatened that its unilaterally imposed schedule was needed "to maintain funding for the [MFFF]."³⁸ MOX Services responded six days later, and again explained why it was not possible to submit an accurate and sufficiently detailed Option 1 proposal on DOE's schedule.³⁹ Again requesting the funding profile it was to assume for estimating purposes, MOX Services noted the tremendous complexity inherent in scheduling

³⁴ See Letter DCS-DOE-002189 from L.R. Barnes, President and COO, Duke Cogema Stone & Webster, LLC, to Martin Newdorf, Federal Project Director, NNSA (Aug. 4, 2005) ("Exhibit 99").

³⁵ *Id.*

³⁶ *Id.*

³⁷ See Letter DOE-DCS-001045 from John Motz, Contracting Officer, DOE, to L.R. Barnes, President and COO, Duke Cogema Stone & Webster, LLC (Aug. 12, 2005) ("Exhibit 100").

³⁸ *Id.*

³⁹ See Letter DCS-DOE-002205 from L.R. Barnes, President and COO, Duke Cogema Stone & Webster, LLC, to John Motz, Contracting Officer, DOE (Aug. 18, 2005) ("Exhibit 101").

multiple years of many functional areas within a given funding profile, where the integrated Project schedule contained 26,000 distinct activities.⁴⁰

With the process of contracting for the construction of the MFFF unresolved, the State of South Carolina and its congressional delegation kept the pressure on DOE to move the Project into the construction phase, regardless of whether MOX Services had sufficient data to support Option 1 cost estimates. On September 21, 2005, Aiken County, South Carolina, filed suit in federal court alleging that the DOE had not met its obligations under the 2002 legislation that stemmed from South Carolina's threatened blockade against the DOE transport of Plutonium 239 to the Savannah River Site.⁴¹ Among the County's specific complaints was that DOE had failed timely to submit a reviewed construction and operations schedule for the MFFF following the resolution of the Russian liability protocol issue.

For its part, on October 14, 2005, the entire South Carolina congressional delegation held a groundbreaking ceremony for the MFFF at the SRS.⁴² At the ceremony, Representative J. Gresham Barrett made clear that the delegation would continue to press DOE to uphold its promise to build the MFFF, and not just store Plutonium 239 at the SRS indefinitely. Stating that "today we begin to see concrete evidence that new missions are coming to the site," Rep. Barrett promised that "the entire delegation will continue to work together to ensure our state never becomes a dumping ground."⁴³ The DOE joined in the sentiment. At the groundbreaking, Rep. Barrett read from a letter sent to him the previous day by Energy Secretary Sam Bodman. The excerpt stated: "Resolving the liability issue was an important achievement, and the Administration remains strongly committed to moving forward with construction of the MOX facility in South Carolina."⁴⁴

⁴⁰ *Id.*

⁴¹ See Complaint in *Aiken County v. Bodman et al.*, 1:05-cv-02737-RBH (D.S.C., Sept. 21, 2005) ("Exhibit 102").

⁴² October 14, 2005, Rep. Barrett Press Release ("Exhibit 103").

⁴³ *Id.*

⁴⁴ *Id.*

Shortly thereafter, a press release announcing that 320 new employees would be hired by the end of 2006 to excavate the MOX site and pour the concrete foundation.⁴⁵

4. NNSA Required MOX Services to Submit Its Option 1 Proposal Before the Designs Were Sufficiently Complete

In its letters to NNSA on August 4 and 18, 2005, MOX Services repeatedly explained that its schedule and cost estimates for Option 1 would be determined in significant measure by the funding profile on which MOX Services' planning would be based. In answer to MOX Services' appeals for this information, on September 8, 2005, NNSA provided MOX Services with a funding profile to use in developing the detailed cost and schedule baseline for the MFFF.⁴⁶ That funding profile replaced one NNSA had provided in June 2005.⁴⁷ The new profile called for MOX Services to prepare its estimates assuming TPC funding of \$388,565,000 for FY06, the start of which was then only three weeks away.

Ten weeks later, on November 21, 2005, in the midst of MOX Services' push to develop Option 1 estimates, DOE changed the FY06 funding profile once again, lowering it by nearly one-third, to \$242,800,000.⁴⁸ In light of MOX Services' repeated appeals for DOE to provide a funding profile on which it could rely, these great changes in funding assumptions injected significant turmoil and uncertainty into the estimating process.

⁴⁵ See Sen. Graham, Press Release, "500 Jobs Coming to Savannah River Site" (May 1, 2006) ("Exhibit 104").

⁴⁶ See Letter DOE-DCS-001075 from Martin Newdorf, Federal Project Director, NNSA, to L.R. Barnes, President and COO, Duke Cogema Stone & Webster, LLC (Sept. 8, 2005) ("Exhibit 105").

⁴⁷ *Id.*; see also Letter DOE-DCS-001007 from Martin Newdorf, Federal Project Director, NNSA, to L.R. Barnes, President and COO, Duke Cogema Stone & Webster, LLC (June 29, 2005) ("Exhibit 106").

⁴⁸ See Letter DOE-DCS-001119 from Martin Newdorf, Federal Project Director, NNSA, to L.R. Barnes, President and COO, Duke Cogema Stone & Webster, LLC (Nov. 21, 2005) ("Exhibit 107").

On March 15, 2006, MOX Services submitted its Option 1 proposal.⁴⁹ This was based in significant part on documentation to support CD-2/3, including scope, cost, and schedule information, that MOX Services had submitted a month earlier.⁵⁰ At the time of the proposal, NNSA was well aware that the MFFF designs were not sufficiently complete to support accurate cost estimates.

On November 10, 2005, NNSA required MOX Services to begin calculating and reporting its cumulative percentage complete for Option 1.⁵¹ This “Joule Performance Metric” weighted design (20%), construction (65%) and startup (15%). MOX Services reported its February 2006 Joule Metric to be 14.8%, of which 14.6% represented design completion.⁵² Thus, overall, MOX Services reported that the MFFF design was 73% complete ($14.6\%/20\% = 73\%$). And, indeed, in the Option 1 proposal, MOX Services estimated design completion percentages that were even lower than those contained in the February 2006 Report. Whereas the February Report stated that the cumulative progress percentages were 87.2% for MFFF engineering work and 54.5% for equipment design work,⁵³ the Option 1 proposal estimated these figures at 85% and 50%, respectively.⁵⁴ Overall, then, the Option 1 proposal estimated design completion to be no more than 70%.⁵⁵

⁴⁹ See Letter DCS-DOE-002464 from David Stinson, President and Project Manager, Duke Cogema Stone & Webster, LLC, to Jim Bieschke, Contracting Officer, DOE (Mar. 15, 2006) (“Exhibit 108”).

⁵⁰ See Letter DCS-DOE-002429 from David Stinson, President, Duke Cogema Stone & Webster, LLC, to Martin Newdorf, Federal Project Director, NNSA (Feb. 16, 2006) (“Exhibit 109”).

⁵¹ See Letter DOE-DCS-001110 from Martin Newdorf, Federal Project Director, NNSA, to L.R. Barnes, President, Duke Cogema Stone & Webster, LLC (Nov. 10, 2005) (“Exhibit 110”).

⁵² See February 2006 MOX Fuel Project Status Report, at p. 2 (“Exhibit 111”). This Report stated that the equipment design work was 54.5% complete as of the end of February.

⁵³ *Id.*

⁵⁴ Option 1 Proposal, Exhibit 30, at 1-3.

⁵⁵ Another aspect of the estimates, discussed in greater detail in Section IV of this REA, bears mentioning here. In many cases, the estimates assumed that the craft work would be subcontracted on a fixed price basis to vendors who would design certain systems and install the associated equipment and commodities. See, e.g., Exhibit 64, Utility Equipment & Piping Element Definition (stating that the fixed priced subcontractor would design and install various equipment, pipes, valves, etc.); Exhibit 64, Fire Protection Element Definition (stating that the “Fire Protection” subcontractor would design and install all fire protection systems). And, as stated repeatedly in the Option 1 proposal documents and related

Importantly, NNSA knew that MOX Services could not have prepared accurate Option 1 estimates for MFFF construction with such incomplete designs, yet it pressed for them anyway. The DOE-commissioned External Independent Review (EIR) of CD 2/3, conducted shortly after MOX Services submitted its Option 1 proposal, warned that the 85% Design Review required under DOE Manual 413.3-1 was performed only on the CP-20 structural construction package.⁵⁶

The Manual, at Chapter 6.7, requires that all design and engineering be “essentially complete” before beginning implementation and procurement activities. Yet, as of July 2006, NNSA’s 85% Design Reviews of major Construction Packages were scheduled to be conducted months or years later.⁵⁷ And, in most cases these 85% Design Reviews were to be followed by their own EIRs.⁵⁸ These deficiencies, which were emphasized in the 2014 Root Cause Analysis,⁵⁹ were highlighted to NNSA Administrator Linton Brooks in a July 2006 memorandum from his Associate Administrator for Infrastructure and Environment. There, Administrator Brooks was warned that, among other things, (1) design reviews had not been performed on major construction packages, (2) contingency estimates had been developed only on “the design completed to date and not the full MOX Project,” and (3) “[f]irst-of-a-kind, new technology complex large scale projects typically carry contingency estimates in the 50%-100% range of the to-go costs.”⁶⁰ The memorandum concluded by counseling against authorizing Critical Decision 2 to establish the performance baseline.⁶¹

correspondence (*see, e.g.*, Exhibit 19 at p. 4; Exhibit 36 at p. 12; Exhibit 67 at p. 28), the Element Definitions often included the express assumption that ASME NQA1-qualified vendors were available. *See, e.g.*, Exhibit 64, Electrical Element Definition and HVAC Element Definition.

⁵⁶ Exhibit 31, EIR (May 2006), at p. 4.

⁵⁷ *See* Memorandum from Bruce Scott to Linton F. Brooks (July 9, 2006), Design Review Schedule Attachment (“Exhibit 112”). This Schedule called for the following reviews: CP 22, BMP Instrumentation (Nov. 20, 2008); CP 23, MFFF HVAC (Oct. 31, 2006); CP 27, AP Piping (Sept. 25, 2006); and CP 28, AP Instrumentation (Jan. 10, 2007).

⁵⁸ *Id.*

⁵⁹ *See* Exhibit 35, RCA, at p. 2-13 (discussing the Project risks introduced when DOE/NNSA fast-tracked the MFFF procurement and construction based on insufficient designs).

⁶⁰ Exhibit 112, at p. 2.

⁶¹ *Id.* at p. 3. The RCA notes that NNSA has since directed that design must be at least 90% complete before Critical Decision 2, a mark that the MOX Project was far from meeting. Exhibit 35, RCA, at p. 2-12 (citing NA-APM Memorandum, Ninety Percent Design Implementation Guidance for [NNSA] Construction Projects, August 9, 2012).

Validating what NNSA knew at the time of the Option 1 estimates, the 2014 RCA repeatedly cited the underdevelopment of designs as a major cause for the insufficient estimates contained in the 2007 Baseline. The RCA faulted the 2007 Baseline approval for being based on “incomplete front-end planning,” stating that the early cost estimates “were based on a level of design that would only support a conceptual level estimate.”⁶² The RCA further concluded that the earliness of the CD-2/3 cost estimate led to an underappreciation of the difficulty of translating the French reference plant design to the U.S. MFFF.⁶³

D. Conclusion: NNSA Is Responsible For Underestimated Construction Costs In Option 1

The circumstances presented here are substantially similar to those in *Ferguson*. In both cases, through no fault of its own, the contracting agency was responsible for causing the contractor to submit estimates and negotiate the associated fee when the available designs were insufficient to support accurate estimates. And, just as the late-arriving designs in *Ferguson* caused space redesigns, utilities growth, and increased level-of effort (57-1 BCA ¶ 1293 at 22, 25), here, too, the evolving designs during construction caused MOX Services to incur significantly higher than anticipated costs. Two examples illustrate the similarities between *Ferguson* and this matter.

First, in *Ferguson* many of the process unit designs were classified when the contract was negotiated, thus the government was responsible for their unavailability to the contractor. Likewise here, as more fully explained in the PUDC Section of this REA, due to concerns over the Russian parallelism requirement, DOE did not allow MOX Services to conduct pre-Option 1 pilot procurements with process unit vendors. *See* REA Section III.

As was revealed when MOX Services conducted such pilots much later, contrary to the parties’ expectations when the estimates for Option 1 were established, the French reference plant designs did not translate nearly so fluently or eloquently across the decades and into the NRC’s strict regulatory regime. Ultimately, the Project diverged substantially from the “replicate the French plants” principle underlying many of the cost estimates. In these circumstances, no less so than in the case of *Ferguson*’s classified designs, the government was responsible for the critical information deficit at the time of the Option 1 estimates.

Second, the bacterial warfare facility in *Ferguson* worked under a number of unique and burdensome safety requirements. An earlier accidental exposure of workers to bacterial agents caused the process equipment developer “to become very safety conscious, and it inaugurated safety standards which greatly increased the complexity and expense of the project.” 57-1 BCA ¶ 1293 at 10. Among the unanticipated costs associated with the safety features, the facility in *Ferguson* required special cement plaster finish on all interior walls,

⁶² Exhibit 35, RCA, at 2.3 CID-3.

⁶³ *Id.* at 2.5.1 CF1; 2.6.3 CF3.

venting hoods on all bacteria work cabinets that cost “considerably in excess of that originally contemplated,” air locks and door controls to segregate particular rooms, a special, dedicated water supply, and unique stainless steel piping constructed under very stringent requirements, including “a special welding process” that required “special techniques and procedures.” *Id.* at 1-5, 7.

So too here, as found by the DOE-commissioned Root Cause Analysis, in many instances safety systems, called Items Relied On For Safety (“IROFS”), “were selected on the basis of overly conservative assumptions intended to accommodate design uncertainty that existed at the time that the license application was submitted to the NRC.”⁶⁴ For example, the gloveboxes were considered IROFS for secondary containment protection to confine radioactive material in an earthquake. Further, each process room was designed to be a segregated fire barrier, a scheme that the RCA concluded “was overly complex and conservative.”⁶⁵

Importantly, as in *Ferguson*, the Project record gives every indication that the parties had little appreciation for the cost impacts the conservative decisions regarding IROFS would impose on the Project. This is because DOE required MOX Services to focus on achieving a licensable design, and not a design that was relatively straightforward to estimate or construct. It was also due to NNSA’s requiring MOX Services to submit the estimates on which Option 1 would be based well before anyone had a firm grasp of just how usable the French reference plant designs would be or how difficult it would be to meet the NRC’s stringent licensing requirements. The record shows that the government did so for political reasons and expediency.

In sum, when time proved the estimating basis, *i.e.*, the designs, to be unsound, the *Ferguson* Board found the “conclusion ... inescapable that the work actually performed by [the contractor] materially exceeded in amount and character the work contemplated by the contract.” 57-1 BCA ¶ 1293 at 22. Because the government was responsible for the original low estimates’ failure to reflect the work the contractor actually performed and not the contractor’s own errors or omissions, the Board concluded that *Ferguson* was entitled to fee on the additional costs. *Id.* at 25. Likewise here, DOE was responsible for MOX Services’ Option 1 estimates being unrealistically low, and, accordingly, DOE is obligated to adjust the Incentive Fee Band for the Project based on the additional MFFF construction costs the Project has experienced and is liable to pay incentive fees to MOX Services under that adjustment.

⁶⁴ RCA, Exhibit 35, at 2-9.

⁶⁵ *Id.*

VI. INCENTIVE FEE PAYMENTS

DOE structured the Contract as a cost-reimbursement contract with several different fee elements, including a cost/schedule incentive fee.¹ The incentive fee set forth a quarterly schedule of incentive fees that MOX Services would be paid for meeting certain cost and schedule targets, as set forth in the Contract. MOX Services is eligible for a total of \$81,990,019 in cost/schedule incentive fee. In order to receive the incentive fee each quarter, MOX Services' performance must be within the estimated Cost Incentive Fee Band and Schedule Incentive Fee Band set forth in the Contract. The Fee Bands and Fee amounts are shown in the following table:

Chart VI.1

Project / Cost & Schedule Incentive Fee Bands ²										
Incentive Fee Bands										
	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	
Cost in Dollars	200,000,000	200,000,000	200,000,000	200,000,000	200,000,000	150,000,000	100,000,000	50,000,000	0	
Schedule	6 months	6 months	6 months	6 months	6 months	6 months	6 months	3 months	0	
Incentive Fee Amounts by FY (7% Fee Schedule) ³										
	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
Incentive Amount in Dollars	3,000,000	12,000,000	14,100,000	15,400,000	14,500,000	9,500,000	8,490,019	5,000,000	0	81,990,019

Beginning in the first quarter of FY11 (October 2010), NNSA suspended incentive fee payments under the Contract, contending that MOX Services was outside the Cost Incentive Fee Band.⁴ The suspension of incentive fee payments was improper because it did

¹ See Contract, Exhibit 1, at J.7.1 (Incentive / Milestone Fee Plan).

² See *id.* at J.7.6 (Project / Cost Incentive Fee Band & Schedule).

³ The Contract rendered the 7% fee schedule contingent on the exercise of Option 2. MOX Services submitted a proposal for Option 2, but NNSA has yet to act on it. MOX Services uses the 7% fee schedule because NNSA has delayed exercise of the option and MOX Services should not be penalized for NNSA's failure to act.

⁴ MOX Services objected to NNSA's actions in a series of correspondence beginning shortly after NNSA began suspending incentive fee payments. See, e.g., Exhibits 113-118 (letter exchanges concerning the suspension of incentive fee payments between Paul Whittingham,

not account for adjustments to the estimated cost of CLIN 0002 as documented below and elsewhere in this REA. The incentive fee payments have not been reinstated, and, to date, fifteen quarterly incentive fee payments improperly remain suspended, for a total of \$50,390,019.

Chart VI.2⁵

	Amount
FY2011 Incentive Fee Payments	\$ 15,400,000
FY2012 Incentive Fee Payments	14,500,000
FY2013 Incentive Fee Payments	9,500,000
FY2014 Incentive Fee Payments	8,490,019
FY2015 (Q1 & Q2) Incentive Fee Payments	2,500,000
Total Incentive Fee Payments Outstanding	\$ 50,390,019

MOX Services is entitled to an adjustment in the estimated value of CLIN 0002 and the Contract's F.1 schedule and, based on that adjustment, payment of the applicable incentive fees. In September 2012, NNSA directed MOX Services to begin reporting its costs and schedule to the increased values in MOX Services' Baseline Change Proposal 12-121, which shortly thereafter was incorporated in the 2012 Rebaseline. Regardless of the parties' positions in 2011 and 2012, the 2012 Rebaseline, and NNSA's direction that MOX Services report to it, made the suspended FY2011 and FY2012 incentive fees immediately payable to MOX Services.

Shortly thereafter, in April 2013, NNSA reduced planned funding of the Project, and it has since failed to provide a full funding profile through Project completion. These actions have prevented MOX Services from determining the Project's EAC and thus deprived MOX Services of data necessary for determining whether incentive fees should be paid. In these circumstances, the EAC and the values of CLIN 0002 should remain fixed as of the 2012 Rebaseline, and, accordingly, the suspended FY2013 and FY2014 incentive fees are immediately payable to MOX Services as well.

In short, MOX Services is entitled to and seeks the immediate payment of \$50,390,019 in incentive fee payments now due.

MOX Services' Contracts Manager, and Rob Swett, NNSA Contracting Officer, from June 10, 2011, to November 22, 2011).

⁵ Contract, Exhibit 1, at J.7.6, Incentive Fee Amounts by FY (7% Fee Schedule).

Alternatively, as set forth in the various sections of this REA, changes under the Contract's Changes clause entitle MOX Services to adjustments in the estimated value of CLIN 0002 and to the Contract's F.1 schedule. The proper adjustments for these changes place MOX Services squarely within the performance range that entitles the Contractor to payment of the suspended incentive fee payments.

A. MFFF Construction Is Within The Project Cost Incentive Fee Band Established In The 2012 Rebaseline

So long as MOX Services meets schedule requirements, it is entitled to incentive fee payments for every quarter in which the Estimate At Completion is projected to be below the total estimated cost of CLIN 0002, or the "Target Cost," plus the applicable Incentive Fee Band.⁶ Stated as a formula:

*If EAC ≤ Estimated Cost of CLIN 2 + Incentive Fee Band;
Then MOX Services is entitled to Incentive Fee.*

MOX Services has remained within the parameters against which NNSA has directed MOX Services to report. Thus MOX Services is entitled to immediate payment of the suspended incentive fees.

The Contract contains the Incentive Fee Band to account for "normal fluctuations."⁷ For example, when Contract modifications lag behind an increase in the EAC, MOX Services is still able to invoice for incentive fee payments if the EAC does not exceed the combined total of the estimated cost of CLIN 0002 (as adjusted for overruns and Contract changes) and the Incentive Fee Band. In other words, in order to bill for incentive fee, MOX Services need not wait for the contractual paperwork to adjust the estimated value of CLIN 0002.

The Contract provides that, in determining MOX Services' incentive fee entitlement, NNSA will evaluate many data inputs provided by the Contractor, including, among others, Earned Value Management Reports, the use of Management Reserve and Contingency, the annual EACs, "and other relevant factual information."⁸

In 2012, MOX Services, in collaboration with NNSA, undertook to reset the Project baseline. This process included MOX Services' submission of multiple iterations of Baseline Change Proposal 12-121 for NNSA staff review, and it culminated in the October 2012 MOX Project Rebaseline.⁹ In that process, MOX Services requested, and NNSA

⁶ *Id.* at J.7.2 ("The total estimated cost of CLIN 002 is hereafter referred to as the Target Cost.").

⁷ *Id.*

⁸ *Id.*

⁹ *See, e.g.,* BCP 12-121 Rev. 1 (Sept. 28, 2012) ("Exhibit 119").

confirmed, that BCP 12-121 would constitute MOX Services' 2012 EAC submission.¹⁰ Later, NNSA directed that MOX Services begin reporting its costs and schedule data against the revised baseline.¹¹

As of October 2012, then, the estimated cost of CLIN 0002 was known and should have been increased consistent with the then-current EAC (the 2012 Rebaseline). In connection with the 2012 Rebaseline, the estimated cost of CLIN 0002 should have been set at the Project EAC plus any remaining Management Reserve, or \$6,352,406,548, through the normal contract administration process.¹² Thus, as of the 2012 Rebaseline, the EAC was below the combined estimated cost of CLIN 0002 and Incentive Fee Band, and, accordingly, MOX Services was eligible to receive all suspended incentive fee payments that had accrued to that date¹³ and was entitled to continue receiving quarterly incentive fee payments so long as the EAC remained within the Incentive Fee Band.¹⁴

Currently, because NNSA has failed to provide MOX Services with an adequate funding profile through Contract completion, no proper EAC exists, and no proper adjustment or comparison to CLIN 0002 can now be made. Thus, for purposes of the incentive fee calculation, the estimated value of CLIN 0002 and the EAC remain as they should have been set in connection with the last proper EAC done in connection with the 2012 Rebaseline. In the alternative, both the EAC and the estimated value of CLIN 0002 are increasing at the same rate as costs are added to each. In either event, MOX Services is entitled to bill for incentive fee payments under the current Contract terms based on the Contract's Cost Incentive Fee Band.

B. MFFF Construction Is Within The Project Cost Incentive Fee Band, As Adjusted By Contract Changes Set Forth In This REA

As an alternative calculation, MOX Services was entitled, as of the 2012 Rebaseline, to an adjustment in the estimated value of CLIN 0002 reflecting the Contract changes and out-of-scope work documented in this REA. When adjustments are made to the estimated cost of CLIN 0002 for the changes in this REA, the Project EAC (in the 2012 Rebaseline) is

¹⁰ Letter DCS-DOE-004151 from Kelly Trice, President and COO, MOX Services, to Robert Swett, Contracting Officer, NNSA (July 3, 2012) ("Exhibit 120"); Letter COR-SRSOCABM-7.09.2012-450852 (July 9, 2012) ("Exhibit 121").

¹¹ Sept. 24, 2012 Letter, Exhibit 12.

¹² See Exhibit 9, 2012 Rebaseline, at p. 6.

¹³ Contract, Exhibit 1, at J.7.2 ("When the target cost and schedule are once again within the Incentive Fee Band, payments of quarterly Incentive Fee will resume. Additionally, all suspended quarterly payments may be invoiced.").

¹⁴ *Id.*

less than the estimated value of CLIN 0002. Thus, as of the 2012 Rebaseline, the MOX Project was within the Cost Incentive Fee Band, and MOX Services is entitled to receive incentive fee payments. As seen below, the 2012 Rebaseline EAC value of \$6,041,144,702 is less than a properly adjusted CLIN 0002 value of \$6,123,999,344 plus the Incentive Fee Band of \$200,000,000, which equates to a Maximum Fee Ceiling of \$6,323,999,344.

Chart VI.1

	Description	Amount
<i>a</i>	October 31, 2012 Contract Proposal Value (Without Fee)	\$ 6,352,406,548
<i>b</i>	Less: MR included in October 31, 2012 EAC	\$ (311,261,846)
<i>c = a+b</i>	October 31, 2012 Contract Proposed EAC	\$ 6,041,144,702
<i>d</i>	Then Current CLIN 0002 Contract Value (Mod 205, June 2012)	\$ 3,925,846,423 ⁽¹⁾
<i>e</i>	Add: Requested Increase to CLIN 0002 Contract Value	2,198,152,921 ⁽²⁾
<i>f = d+e</i>	Estimated Cost of CLIN 0002	\$ 6,123,999,344
<i>g</i>	Add: Incentive Fee Band	\$ 200,000,000
<i>h = f+g</i>	Max Incentive Fee Ceiling	\$ 6,323,999,344
<i>i = c-h</i>	Amount Above/(Below) Ceiling	\$ (282,854,642)

Notes:

(1) This Contract Value includes \$811,164,789 in Base Contract costs and excludes \$5,957,832 of DMO.

(2) The amount by which CLIN 002 should be increased for purposes of determining MOX Services' entitlement to incentive fee includes \$2,507,993,356 in increased costs less \$252,071,756 that MOX Services has omitted from this REA to account for reduced process unit scope (PCN 08-0211), engineering cost growth for which MOX Services is responsible (REA 11-027), and other reasons. See Section I, Executive Summary, p.2. From this subtotal of \$2,255,921,600, MOX Services has removed an additional \$57,768,678 of cost growth included in the REA that has already been recognized in contract modifications since Mod. 205 in June 2012. This REA does not include \$168,603,379 in Base Contract cost growth.

As discussed above, no proper EAC currently exists, and no proper adjustment or comparison to CLIN 0002 can now be made. Thus, for purposes of the incentive fee calculation, the estimated value of CLIN 0002 and the EAC remain as calculated in the chart above. In the alternative, both the EAC and the estimated value of CLIN 0002 are increasing at the same rate as costs are incurred. In either event, MOX Services is entitled to bill for incentive fee payments under the current Contract terms based on the Contract's Cost Incentive Fee Band.

This REA does not address any necessary adjustments to the TPC or the adjusted TPC. The parties will need to address the calculation of these amounts in connection with

the Project rebaseline. The collateral savings/cost share calculation in the contract will be calculated with the incorporation of the cost adjustments documented in this REA and any future adjustments (*e.g.*, funding impacts) at the completion of the Project.

C. MFFF Construction Is Within The Schedule Incentive Fee Band

MOX Services meets the schedule requirements so long as the projected schedule does not exceed the date listed in clause F.1 by more than the time provided in the Incentive Fee Band.¹⁵ As of the 2012 Rebaseline, MOX Services was within the Schedule Incentive Fee Band, and currently is within this Band, as properly adjusted as described in this REA. MOX Services' performance currently is within the Schedule Incentive Fee Band for at least two reasons.

First, the revised schedule baseline against which NNSA directed MOX Services to report was extended from October 2016 to November 2019, inclusive of schedule contingency.¹⁶ For the purpose of calculating the MOX Services' incentive fee entitlement, the six month Schedule Incentive Fee Band, to May 2019, must be added to this date. Until NNSA reduced the Project's funding and failed to provide a new funding profile (defeating MOX Services' ability to establish a schedule), MOX Services' projected schedule was within the revised schedule baseline, entitling the Contractor to incentive fee payments.

Second, under the Changes clause, the date at clause F.1 is subject to adjustment as necessary to account for changes to the Contract.¹⁷

As discussed in Section III of this REA, the Project schedule must be adjusted due to changes in the equipment procurements. As summarized in the schedule below,¹⁸ the process unit delays ultimately delayed the Project because the process units controlled the critical path. The F.1 date must be extended to November 2019 to reflect delays caused by changes

¹⁵ Contract, Exhibit 1, at J.7.2 ("If the projected schedule exceeds the date listed [in] clause F.1, but by no more than the additional time provided in the Incentive Fee Band, then the Government will consider the Contractor to be within schedule.").

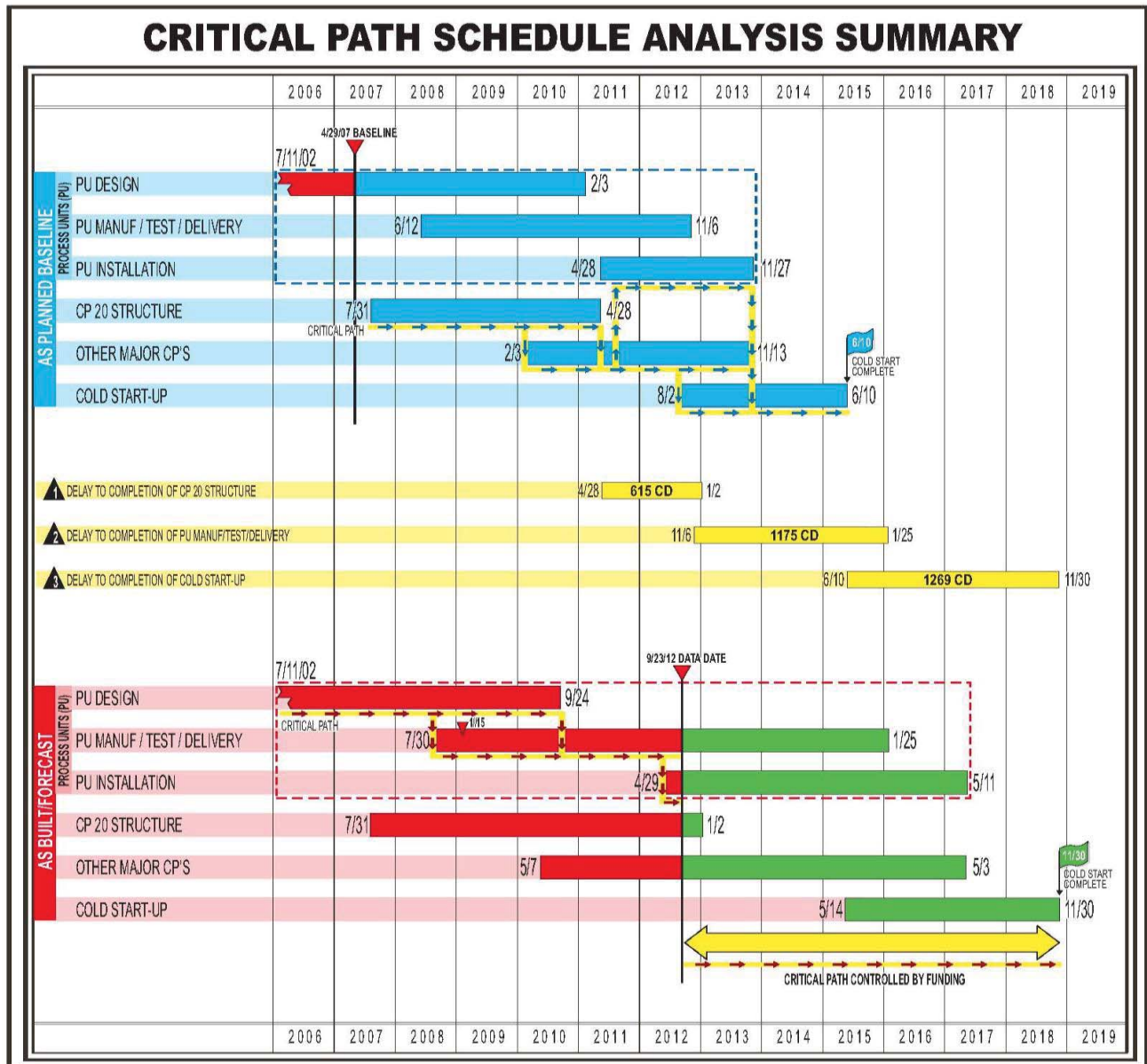
¹⁶ Exhibit 9, 2012 Rebaseline, at p. 7.

¹⁷ Contract, Exhibit 1, at B.3, J.7.2; FAR 52.243-2 (calling for an adjustment in all "affected terms" when a change increases the estimated cost or time required to perform the contract); *see also* FAR 52.216-10(d) (providing for equitable adjustment of incentive fee); *Northrop Grumman Corp. v. United States*, 41 Fed. Cl. 645, 647 (1998) (citing FAR 52.216-10(d) to explain that an equitable adjustment of the incentive fee is articulated as an adjustment "in the target cost, target fee, minimum fee, and maximum fee, as appropriate.").

¹⁸ Chart VI.4, Critical Path Schedule Analysis Summary, does not include contingency, and thus shows the revised baseline schedule without contingency of November 2018.

associated with the equipment procurements (discussed in Section III) and which would have been met under the 2012 Rebaseline.

Chart VI.2



Moreover, reductions in funding and the elimination of any full funding profile after 2014 currently obscure the total schedule impact from the Contract changes discussed in this REA. A schedule cannot be developed to Project completion, and Project completion is being delayed each day the funding issues are not resolved. Thus, MOX Services is entitled to an extension of the F.1 date for the period of time the Project remains without an adequate funding profile for this and future years.

With the adjustments in the CLIN 0002 cost and the schedule completion date discussed above, the Project falls within both incentive fee bands, and MOX Services is entitled to receive the previously-suspended incentive fee payments, totaling \$50,390,019.

**VII. MOX Services Request for Equitable Adjustment
Terms & Acronyms**

	<u>Term / Acronym</u>	<u>Definition</u>	<u>First Defined at (Section & Page)</u>
1.	MOX Services	CB&I AREVA MOX Services, LLC	Sec. I at 1
2.	REA	Request for Equitable Adjustment	Sec. I at 1
3.	Contract	Contract DE-AC02-99CH10888	Sec. I at 1
4.	MOX	Mixed Oxide	Sec. I at 1
5.	MFFF	Mixed Oxide Fuel Fabrication Facility	Sec. I at 1
6.	NNSA	National Nuclear Security Administration	Sec. I at 1
7.	Project	MFFF Project	Sec. I at 1
8.	BCP	Baseline Change Proposal	Sec. I at 1
9.	2012 Rebaseline	MOX Services' Sept. 2012 BCP and Oct. 2012 MOX Project Rebaseline Proposal	Sec. I at 1
10.	DOE	Department of Energy	Sec. I at 1
11.	TPC	Total Project Cost	Sec. I at 1
12.	EAC	Estimate At Completion	Sec. I at 1
13.	BCP 12-121	Baseline Change Proposal 12-121	Sec. I at n.2
14.	PMDA	Plutonium Management and Disposition Agreement	Sec. I at 2
15.	SRS	Savannah River Site	Sec. I at 3
16.	BOAs	Basic Ordering Agreements	Sec. I at 4
17.	2007 Baseline	Critical Decision 2 performance baseline	Sec. I at 4
18.	NRC	Nuclear Regulatory Commission	Sec. I at 5
19.	QA / QC	Quality Assurance / Quality Control	Sec. I at 5
20.	EVMS	Earned Value Management System	Sec. I at 7
21.	PEP	Project Execution Plan	Sec. I at 8
22.	DCAA	Defense Contract Audit Agency	Sec. II at 3
23.	NQA-1	Nuclear Quality Assurance	Sec. III at 1
24.	ASME	American Society of Mechanical Engineers	Sec. III at 1

	<u>Term / Acronym</u>	<u>Definition</u>	<u>First Defined at (Section & Page)</u>
25.	OIG	DOE Office of Inspector General	Sec. III at 4
26.	EIR	External Independent Review	Sec. III at 10
27.	CD	Critical Decision	Sec. III at n. 39
28.	TPRA	Technical and Programmatic Risk Assessment	Sec. III at n. 60
29.	PAD	Pellet Repackaging Unit	Sec. III at 15
30.	PAR	Scrap Box Loading Unit	Sec. III at 15
31.	RCA	Root Cause Analysis	Sec. III at 17
32.	PUDC	Process Unit Design and Commissioning	Sec. III at 23
33.	PAF	Process Unit Assembly Facilities	Sec. III at 23
34.	SOW	Statement Of Work	Sec. III at 24
35.	NTM	Jar Storage and Handling	Sec. III at 27
36.	NPG	Homogenization and Pelletizing	Sec. III at 27
37.	PFE	Sintering Furnace	Sec. III at 27
38.	GME	Cladding and Decontamination	Sec. III at 27
39.	PMCS	Project Management Control System	Sec. III at 32
40.	T&M	Time and Materials	Sec. IV at 1
41.	Kiewit	Kiewit Federal Group	Sec. IV at 8
42.	CPIF	Cost Plus Incentive Fee	Sec. IV at 8
43.	Baker	Baker Concrete Construction, Inc.	Sec. IV at 9
44.	Alberici	Alberici Constructors, Inc.	Sec. IV at 10
45.	IROFS	Items Relied On For Safety	Sec. V at 15

EXHIBIT F

AWARD/CONTRACT		1. THIS CONTRACT IS A RATED ORDER UNDER DPAS 115 CFR 3501		RATING DOC 3		PAGE OF PAGES 1 175	
2. CONTRACT (Proc. Init. Ident.) NO. DE-AC02-99CH10888		3. EFFECTIVE DATE See Block 20 C.		4. REQUISITION/PURCHASE REQUEST/PROJECT NO. 02-99CH10888.000			
5. ISSUED BY U.S. Department of Energy Chicago Operations Office 9800 South Cass Avenue Argonne, IL 60439		6. ADMINISTERED BY (If other than Item 5)		7. NAME AND ADDRESS OF CONTRACTOR (No., street, city, county, State and ZIP Code) DUKE, COGEMA, STONE & WEBSTER, LLC 400 South Tryon Street Charlotte, NC 28202			
8. DELIVERY <input checked="" type="checkbox"/> FOB ORIGIN <input type="checkbox"/> OTHER (See below)		9. DISCOUNT FOR PROMPT PAYMENT N/A		10. SUBMIT INVOICES (4 copies unless otherwise specified) TO THE ADDRESS SHOWN IN		ITEM Block 12	
11. SHIP TO/MARK FOR N/A		12. PAYMENT WILL BE MADE BY CR-54/CHO Accounts Payable Division U.S. Department of Energy, P.O. Box 500 Germantown, MD 20874-0500		13. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION: <input type="checkbox"/> 10 USC 2304(c) <input type="checkbox"/> 41 USC 253(c)(1)			
14. ACCOUNTING AND APPROPRIATION DATA Appropriation Symbol: 89X0243 91 B&R No. GA0102014;39GA990143-000 Allotment: CH-93-91		15A. ITEM NO. 1		15B. SUPPLIES/SERVICES Mixed Oxide (MOX) Fuel Fabrication and Reactor Irradiation Services		15C. QUANTITY 1	
15D. UNIT N/A		15E. UNIT PRICE N/A		15F. AMOUNT			
15G. TOTAL AMOUNT OF CONTRACT ▶ See Subject B.2(a) & (b)							
16. TABLE OF CONTENTS							
PART I - THE SCHEDULE				PART II - CONTRACT CLAUSES			
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X	B	SUPPLIES OR SERVICES AND PRICES/COSTS	4	PART III - LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACH.			
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X	D	PACKAGING AND MARKING	2	PART IV - REPRESENTATIONS AND INSTRUCTIONS			
X	E	INSPECTION AND ACCEPTANCE	3	K		REPRESENTATIONS, CERTIFICATIONS AND OTHER STATEMENTS OF OFFERORS	
X	F	DELIVERIES OR PERFORMANCE	8	L		INSTRS., CONDS., AND NOTICES TO OFFERORS	
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CONTRACTING OFFICER WILL COMPLETE ITEM 17 OR 18 AS APPLICABLE							
17. <input checked="" type="checkbox"/> CONTRACTOR'S NEGOTIATED AGREEMENT (Contractor is required to sign this document and return 3 copies to issuing office. Contractor agrees to furnish and deliver all items or perform all the services set forth or otherwise identified above and on any continuation sheets for the consideration stated herein. The rights and obligations of the parties to this contract shall be subject to and governed by the following documents: (a) this award; contract; (b) the solicitation, if any; and (c) such provisions, representations, certifications, and specifications, as are attached or incorporated by reference herein. (Attachments are listed herein.)				18. <input type="checkbox"/> AWARD (Contractor is not required to sign this document, but offer on Solicitation Number including the additions or changes made by you which additions or changes are set forth in full above, is hereby accepted as to the items listed above and on any continuation sheets. This award consummates the contract which consists of the following documents: (a) the Government's solicitation and (b) this award; contract, and further contractual document is necessary.			
19A. NAME AND TITLE OF SIGNER (Type or print) Robert H. Ihde, President and CEO DUKE, COGEMA, STONE & WEBSTER, LLC				20A. NAME OF CONTRACTING OFFICER JOHN D. GREENWOOD ACQUISITION AND ASSISTANCE			
19B. DATE SIGNED 3/9/99				20B. DATE SIGNED 3/22/99			
19C. SIGNATURE OF PERSON AUTHORIZED TO SIGN				20C. SIGNATURE OF CONTRACTING OFFICER			

Contract No. DE-AC02-99CH10888
Modification A124

PART I

SECTION B

SUPPLIES OR SERVICES AND PRICES/COSTS

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<u>ITEM</u>	<u>SUPPLIES OR SERVICES</u>	<u>Estimated Price</u>
0001	FUEL SERVICES	\$ 384,743,860
	Base Contract (CPFF)	\$ 273,653,619
	Lead Assembly Program(Eurofab) (Base Contract) (CPIF)	\$ 71,426,431
	Mission Reactors and Site Modification Segment (Option 1) (CPIF)	\$ 39,663,810
0002	MIXED-OXIDE FUEL FABRICATION FACILITY	\$ 4,136,971,883
	Base Contract (CPFF)	\$ 798,405,507
	Base Contract (CPIF)	\$ 12,759,282
	Option 1 (CPIF, CPAF, Milestones)	\$ 3,248,329,468
	Early Option 1 (CD 2/3, Site Prep, CP-20)	\$ 77,477,626
0003	OPTION 2, MFFF OPERATIONS	
	Contract type TBD	TBD
0004	OPTION 3 MFFF DEACTIVATION	TBD
	FFP	
0005	OTHER MOX ACTIVITIES	\$ 10,437,767
	Russian (CPFF)	\$ 8,684,018
	Other Activities (CPFF)	\$ 1,290,421
	Pass-thru Support	\$ 355,651
	RAP Support (Cost Reimbursement)	\$ 107,677
0006	TECHNOLOGY TRANSFER FEE AGREEMENT	\$ 28,200,000
	Base Contract (FFP)	\$ 28,200,000
0007	FEE	\$ 268,082,369
0007A	FIXED FEE	\$ 77,599,035
	Base Contract	\$ 60,873,045
	Base Contract Russian	\$ 971,190
	Early Option 1	\$ 4,703,174
	Option 1	\$ 11,000,000
	Other Activities	\$ 51,626
0007B	INCENTIVE FEE	\$ 148,055,406
	Base Contract Incentive Fee Pool (EUROFAB)	\$ 7,575,339
	Option 1 Incentive Fee Pool (Mission Reactors)	\$ 1,070,923
	Option 1 Incentive Fee Pool (Option 1 MFFF)	\$ 76,862,871
	Option 1 Milestone Fee Pool (Option 1 MFFF)	\$ 60,973,520
	Base Contract Milestone fee Pool (MIFT)	\$ 1,572,753
0007C	AWARD FEE	\$ 42,427,928
	Option 1 Award Fee	\$ 42,427,928
	TOTAL ESTIMATED PRICE	\$ 4,828,435,879

Part ISECTION B—SUPPLIES OR SERVICES AND PRICES/COSTS**B.1 ITEMS BEING PROCURED**

- (a) The Contractor shall, in accordance with the terms of this contract, provide the personnel, facilities, equipment, materials and services (except as may be furnished by the Government), and otherwise do all things necessary for, or incident to providing its best efforts so as to carry out in an efficient and effective manner the necessary and related work to accomplish the requirements of the Base Contract and Option 1 as set forth in Part I, Section C - Description/Specifications/Work Statement.
- (b) The Government has the unilateral right to extend the term of this contract for the performance of the SOW for Option 2, as described in Part III, Section J, Attachment 1, Subpart V in accordance with Clause H.6, Option to Extend Services.
- (c) The Government has the unilateral right to extend the term of this contract for the performance of the SOW for Option 3, as described in Part III, Section J, Attachment 1, Subpart VI in accordance with Clause H.6, Option to Extend Services.
- (d) The Contractor shall ensure the performance of Value Engineering services in accordance with the clause of this contract entitled, Value Engineering -- Architect-Engineer (MAR 1990) for the design of the MOX Fuel Fabrication Facility (MFFF) in accordance with the requirements contained in Part III, Section J, Attachment 1, Subpart II.A.1, Facility Design. The estimated cost and fixed fee for this effort shall not be separately priced, but be included in the overall estimated cost and fixed fee for performance of the work under this contract in paragraph B.2 below.
- (e) All work under this contract shall be performed under the general guidance and direction of the Contracting Officer's Representative (COR) whose responsibilities are defined in the clause DEAR 952.242-70, Technical Direction, set forth in Part I, Section I General Contract Clauses. Such guidance and direction shall not, however, effect any change in the Schedule, Statement of Work, Reporting Requirements, or other provisions of this contract. Such changes shall only be by action of the Contracting Officer.
- (f) Whereas the Contractor and Government recognize the costs and fee for Option 1 work scope associated with operator training and protective force are not included in this initial Option 1 agreement; both parties hereby agree to act in good faith to ensure all steps are taken to reach final disposition of this scope, cost and fee at the earliest practicable date.
- (g) Whereas the Contractor and Government recognize the importance of achieving approval of Contractor's Hot Start Up and AP Start Up Plan; both parties hereby agree to act in good faith to ensure all steps required to add this scope with additional cost, fee, and schedule to the contract will be achieved at the earliest practicable date, as detailed in Clause H.29 paragraph (g).

B.2 ESTIMATED COST, FEE, OBLIGATION OF FUNDS AND FINANCIAL LIMITATIONS

The estimated cost for the performance of the work under CLINs 1-6 are exclusive of fee. The total estimated cost is \$4,560,353,510. The total estimated fee (CLIN 7) is \$268,082,369. The total estimated price is \$4,828,435,879.

- (a) The estimated cost for the performance of the work under this contract is:

- (b) Pursuant to the clause entitled, "Limitation of Funds", set forth in Part II, Section I, the following amounts have been obligated and are available for payment of allowable costs and fee under this contract:

Type	Appropriation Symbol	B&R	STARS Value	Obligated
MOX TEC (Construction)	89X0243.91	39DS10000	2222331	\$467,808,000.00
MOX TEC (Construction)	89X0319.91	39AF59000	2720685	\$221,720,974.00
MOX TEC (Construction)	89X0309.91	39NN62000	2220582	\$3,225,142,574.70
MOX OPC (Operating)	89X0319.91	AF5910000	2720684	\$35,442,750.00
MOX OPC (Operating)	89X0309.91	NN6001070	2221271	\$187,649,959.87
MIFT (OPEX)	89X0243.91	DS1005000	2222336	\$12,244,386.00
MIFT (OPEX)	89X0309.91	NN6001030	2221267	\$238,891,515.30
MOX Operations (OPEX)	89X0243.91	DS1010000	2222337	\$2,030,000.00
MOX Operations	89X0309.91	NN6001090	2222385	\$676,000.00
Russian Program (Operating)	89X0309.91	NN6103120	2221311	\$9,655,207.79
Other Activities	89X0309.91	NN6001050	2221269	\$5,365,000.00
Other Activities (APM Vehicle Support)	8913/140313.91	PS0201100	2222511	\$5,000.00
Other Activities (NA-26 Vehicle Support)	89X0313.91	PS0201037	2221474	\$75,501.47
Other Activities (DP Vehicle Support-WSI)	89X0243.91	DP0901431	2222221	\$10,000.00
RAP Support	89X0243.91	DP4015011	2221775	\$25,075.00
RAP Support	89X0240.91	DP4015042	2221791	\$19,500.00
AMS Support	89X0240.91	DP4015032	2221785	\$10,975.00
Total Obligated Funding:				\$4,406,772,419.13

These funding amounts may be increased unilaterally by DOE by written notice to the Contractor and may be increased or decreased by written agreement of the parties (whether or not by formal modification of this contract.)

- (a) When funds are obligated under this contract, DOE shall inform the Contractor in writing regarding any limitations on amounts available for operating and plant and capital equipment expenditures under this contract. The limitations so established shall be binding on the Contractor.
- (b) The clause FAR 52.232-22, Limitation of Funds shall be applicable and the clause FAR 52.232-20, Limitation of Cost, inapplicable until such time as an amount equal to the estimated cost and fixed fee set forth in paragraphs (a) and (b) above is obligated to this contract, and thereafter the Limitation of Cost clause shall be applicable and the Limitation of Funds clause inapplicable.

B.3 FIXED, AWARD, MILESTONE AND INCENTIVE FEES

- (a) All fixed and incentive fees made part of the contract prior to execution of this contract modification (A124) shall not be impacted by this modification. This clause, B.3, applies solely to the additional fee associated with the definitization of Option 1. All Award and Milestone fee payments paid to the contractor pursuant to this Section B.3 are final and not subject to future adjustment.
- (b) Fee shall consist of three (3) separate fee pools; incentive, award and milestone fee. The contractor shall also share in savings and overrun costs as described in clause B. 4 below. The fee pools shall be earned and paid as described below.
- (1) Cost/Schedule Incentive Fee –**
- (i) The Contractor shall earn the Target Incentive Fee of \$76,862,871, by completion of the Scope of Work (Part II, Base Contract SOW, Section A, MOX Fuel Fabrication Facility and Part III, Option 1 – Exercised Segments, located at Part III Section J, Attachment 1) within the value of CLIN 0002 and within the period of performance established by the approved project schedule (See F.1). CLIN 0002 shall be adjusted as necessary to account for changes to the prime contract. For billing purposes, the Cost/Schedule Incentive Fee pool shall be allocated across the contract period of performance in accordance with the Incentive/Milestone Fee Plan. The Incentive/Milestone Fee Plan (Section J, Attachment 7) shall be jointly developed and will require bilateral approval.
- (ii) The Incentive/Milestone Fee Plan (paragraph 2 A) establishes the parameters used by the Government for determining if the Contractor's performance is likely to meet the CLIN 0002 cost and schedule upon completion of CLIN 0002. Performance under the Incentive/Milestone Fee Plan shall be effective July 1, 2008, and beginning October 1, 2008, the Contractor shall be entitled to submit quarterly invoices for incentive fee earned that quarter as set forth in the Incentive/Milestone Fee Plan. The Contractor may

submit quarterly invoices for any quarter where the Government has determined the Estimate At Completion (EAC) will not exceed the parameters established in the Incentive/Milestone Plan paragraph 2.A and Attachment 1 Project/Cost Incentive Fee Band and Schedule. In any period where the Contractor's cost or schedule performance exceeds those parameters, payment of Incentive Fee for that period shall be suspended and rolled over to future periods. If in subsequent periods the Contractor recovers and falls within the those parameters, the Contractor may then begin billing for the fee earned in that specific quarter and any previous quarter where the incentive fee was suspended for the reason stated above.

- (iii) Contractor's cost and schedule performance will be evaluated solely by the Government. In making its determination the Government shall use Earned Value Management System (EVMS) Reports, the Contractor's use of Management Reserve and/or DOE's contingency, schedule float, the annual EAC, and other relevant, factual information.
- (iv) Cost/Schedule Incentive Fee payments to the Contractor shall be 100% provisional for the 12 months following the period in which it is earned. At the end of the fifth quarter following the quarter the incentive fee is earned, 50% of the Interim Incentive Fee payments received by the Contractor will become permanent provided the Contractor's performance is still within established parameters. This process will continue each quarter of Option 1 performance. If at any time the Contractor is not performing within the cost and schedule parameters established per Incentive /Milestone Fee Plan, paragraph 2.A, payments of that incentive fee shall stop and all such incentive fee that is provisional shall remain provisional until the Contractor's performance improves to once again fall within established cost and schedule parameters established per Incentive /Milestone Fee Plan.

For example, Cost/Schedule Incentive fee earned in the 4th quarter of calendar year 2008 (7/1/08-10/30/08) will be 100% provisional for 4 quarters. Assuming the Contractor is still performing within parameters on 9/30/09, then 50% of Cost/Schedule Incentive Fee earned the 4th quarter of 2008 will be considered final.

- (2) **Award Fee** – The contractor may earn award fee of up to: \$42,427,928. The contractor shall be provided a copy of the award fee plan no later than 30 days after the beginning of each fiscal year. The award fee period of performance shall be 1 year beginning on October 1, 2007. Contractor's performance shall be evaluated in accordance with the award fee plan. Award fee shall be paid on an annual basis within 75 days after the end of the evaluation period or the Award Fee Determination in accordance with the Award Fee Plan.
- (3) **Milestone Fee** – The Contractor may earn milestone fee for successful completion of key milestones as detailed in Incentive/Milestone Fee Plan. Milestones are separately identified as Option 1 and MIFT, as follows:
 - i. Option 1 Milestone fee remains unchanged at \$60,973,520 (Page J.7.8).
 - ii. Base Contract (MIFT) Milestone Fee amount is \$1,572,753 (Page J.7.10).

B.4 COLLATERAL SAVINGS/COST SHARE

- (a)
 - (i) The Collateral Savings/Cost Share Incentive is the method used to incentivize project completion below project target costs. It is not to be confused with the incentive referenced in Section B.3 (b)(1) above. For purposes of determining the collateral shared costs or savings, the Government will use the total allowable, final project costs for the physical completion and acceptance of the Mixed-Oxide Fuel Fabrication Facility (MFFF), compared to the adjusted Total Project Cost (TPC). TPC, as referenced in project documents reflects the total project cost of \$4,857,129,000 for DOE to design and construct the MFFF. The TPC includes some costs not directly controlled by the Contractor, such as fee, technical support services to DOE, extended site services and the electrical substation. Therefore, for the purposes of this Collateral Savings/Cost Share Incentive only, the parties agree that the TPC is the adjusted TPC in the amount of \$4,486,566,935. The adjusted TPC amount consists only of the total estimated costs of activities whose costs are directly or indirectly impacted by the Contractor's actions in performance of work under this contract. This includes; but is not limited to, the cost of work previously authorized by the contract, utilities, and DOE's contingency.

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(ii) For determining the Collateral Savings/Cost Share, the Government will use the total allowable, final project costs for the physical completion and acceptance of the MFFF. The costs shall be calculated using the Contractor's approved Earned Value Management System and the results of any Government audits. Costs incurred outside the contract, such as M&O costs, will be based on billings received and reflected in the Earned Value Management System. If the total allowable, final project costs are less than the adjusted TPC, the Contractor shall be entitled to 25 cents for every dollar under. If the total allowable, final project costs exceed the adjusted TPC, the Contractor shall be liable for 25 cents for every dollar over. The Contractor's share of any adjusted TPC overrun shall be limited to an amount equal to the remaining provisional incentive fee referenced in Section B.3 as calculated prior to the final fee payment upon physical completion of the MFFF.

(iii) In exchange for using the adjusted TPC as a basis for calculating the Collateral Savings/Cost Share Incentive (instead of the Target Cost of CLIN 0002) the Contractor agrees that the negotiated fee, as set forth in Section B.3 above, will not increase, FAR 52.243-2 Changes (Cost Reimbursement) notwithstanding, with the following exceptions:

- 1) The addition of Protective Force as described in Section J, Attachment 1, Part IV, Option 1- Unexercised Segments, paragraph 7;
- 2) The addition of Operator Training as described in Section J, Attachment 1, Part IV, Option 1- Unexercised Segments, paragraph 11;
- 3) The addition of MR as described in B.5; or
- 4) if Total Project Costs (TPC) are changed and the change is fee-bearing in accordance with the terms and conditions of this contract.

A change of the TPC (and the adjusted TPC, as well) may occur for a variety of reasons. This could occur when changes to the work scope, either up or down are significant enough to warrant a change in the Congressional baseline of the project costs or when projected cost overruns exceed any remaining Management Reserve. Additionally, as described in the Project Execution Plan, a change rebaseline of the TPC may result when certain project risks which were not included in the calculations of Project Costs occur. Those events which may or may not be fee-bearing include, but are not limited to:

- a. Force Majeure - schedule variances outside the control of the project due directly or indirectly to civil strife, organized labor actions, or Acts of God;
- b. Insurable Risks - Costs incurred that will typically be covered by commercially available insurance (e.g., fire);
- c. Funding Changes from basis used in project baseline due to changes in the congressionally-authorized funding and
- d. Risks related to the requirement for rough parallelism with the Russian program.

If an outside of the project risk (as described above) occurs, additional funding will be required and a revision to the TPC. If, however, NNSA decides to fund an outside of the project risk with existing project contingency, the Adjusted TPC will be increased by that amount.

Reductions to estimated costs initiated by the contractor will not reduce the adjusted TPC. Cost or scope reductions directed in writing by NNSA may result in a reduction of adjusted TPC.

B.5 FIXED FEE

The Fixed Fee amount of \$11,000,000 identified in B.2.a will be invoiced and paid as follows:

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- a. \$6,000,000 may be invoiced upon execution of this modification A124;
- b. \$2,600,000 may be invoiced upon submission and Government approval of an acceptable Management Reserve (MR) definitization proposal, such approval or disapproval not to be unreasonably withheld. The proposal should be submitted in accordance with the definitization schedule or as soon as practical. Upon receipt of the MR proposal, the Government shall have a minimum of 2 weeks to review the proposal and determine acceptability before the Contractor submits an invoice. Regardless of when the proposal is submitted, the invoice shall be submitted not earlier than 15 August, 2008.
- c. \$2,400,000 is payable upon the definitization of the MR proposal. The parties agree that the Government and Contractor will make good faith effort in definitizing the MR proposal within 180 days of this modification.

PART I

SECTION C

DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

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PART I

SECTION C

DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

C.1 STATEMENT OF WORK

The Base Contract Statement of Work (SOW) to be performed under this contract is set forth in PART III, Section J, Attachment 1, Subpart II. The SOW to be performed for the exercised segments of Option 1 – is set forth in Part III, Section J, Attachment 1, Subpart III. The SOW to be performed under this contract for Options 2 and 3, if exercised, are set forth in Part III, Section J, Attachment 1, Subparts V and VI, respectively.

C.2 PLANS AND REPORTS

- (a). The Contractor shall prepare and submit (postage prepaid) the plans and reports indicated on DOE F 1332.1, Reporting Requirements Checklist, in Part III, Section J, Attachment 4, to the addresses indicated in the attachment to the form. The level of detail the Contractor must provide in the plans and reports shall be commensurate with the scope and complexity of the task and the reporting categories delineated in Block 4, Planning and Reporting Requirements, or Block 6, Special Instructions, on the DOE F 1332.1 or in a particular contract clause. The Contractor shall be responsible for levying appropriate reporting requirements on any subcontractors in such a manner to ensure that data submitted is compatible with the data elements that the prime contractor is responsible for submitting to DOE. If subcontractors are involved, the prime contractor plans and reports submissions shall be structured in such a manner to permit clear identification of the subcontractor's cost and manpower inputs. Plans and reports submitted in compliance with this provision are in addition to any other reporting requirements of this contract.
- (b). The Contractor shall provide DOE with a copy of plans, procedures, and other documents required by the Nuclear Regulatory Commission, the Occupational Safety and Health Administration or other regulatory agencies related MFFF security, emergency management and/or safety. Copies should be provided as draft and prior to submittal to the regulatory agencies.

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PART I

SECTION D

PACKAGING AND MARKING

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PART I

SECTION D

PACKAGING AND MARKING

D.1 PACKAGING

- (a) Preservation, packaging, and packing for shipment or mailing of all work delivered hereunder shall be in accordance with good commercial practice and adequate to insure acceptance by common carrier and safe transportation at the most economical rate(s).
- (b) Except for those reports where the urgency of receipt of the report by the Government necessitates the use of the most expeditious method of delivery, reports deliverable under this contract shall be mailed by first-class mail, unless the urgency of the deliverable sufficiently justifies the use other than of first-class mail.

D.2 MARKING

- (a) Each package, report or other deliverable shall be accompanied by a letter or other document which:
 - 1) Identifies the contract by number under which the item is being delivered.
 - 2) Identifies the deliverable Item Number or Report Requirement which requires the delivered item(s).
- (b) For any package, report, or other deliverable being delivered to a party other than the Contracting Officer, a copy of the document required in (a) above shall be simultaneously provided to the Contracting Officer.

PART I

SECTION E

INSPECTION AND ACCEPTANCE

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PART I

SECTION E

INSPECTION AND ACCEPTANCE

E.1 FAR 52.246-5 INSPECTION OF SERVICES - COST-REIMBURSEMENT (APR 1984)
(APPLICABLE TO BASE CONTRACT AND OPTIONS 1 AND 2)

- (a) Definition. "Services," as used in this clause, includes services performed, workmanship, and material furnished or used in performing services.
- (b) The Contractor shall provide and maintain an inspection system acceptable to the Government covering the services under this contract. Complete records of all inspection work performed by the Contractor shall be maintained and made available to the Government during contract performance and for as long afterwards as the contract requires.
- (c) The Government has the right to inspect and test all services called for by the contract, to the extent practicable at all places and times during the term of the contract. The Government shall perform inspections and tests in a manner that will not unduly delay the work.
- (d) If any of the services performed do not conform to contract requirements, the Government may require the Contractor to perform the services again in conformity with contract requirements, for no additional fee. When the defects in services cannot be corrected by reperformance, the Government may (1) require the Contractor to take necessary action to ensure that future performance conforms to contract requirements and (2) reduce any fee payable under the contract to reflect the reduced value of the services performed.
- (e) If the Contractor fails to promptly perform the services again or take the action necessary to ensure future performance in conformity with contract requirements, the Government may (1) by contract or otherwise, perform the services and reduce any fee payable by an amount that is equitable under the circumstances or (2) terminate the contract for default.

E.2 ACCEPTANCE

Acceptance of all work and deliverables under this contract (including reporting requirements) shall be accomplished by the Contracting Officer or any duly authorized representative. Acceptance criteria for deliverables required by this contract (excluding reporting requirements) are detailed in Section F.2, Delivery Requirements.

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PART I

SECTION F

DELIVERIES OR PERFORMANCE

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The performance of the work for the Base Contract described in Part I, Section C - Description/Specifications/Work Statement shall commence at the time of contract award, and shall continue to completion thereof, estimated to occur on or about See Table Below, unless sooner terminated as hereinafter provided or extended by exercise of any, or all, of the options contained in Part I, Clause H.6 - Options to Extend Services. The following is a summary of the period of performance for the base contract and option periods.

In the event of conflict between the dates listed in F.1 and the Statement of Work (Part III, Section J, Attachment 1), the dates in F.1 shall apply.

<u>Description</u>	<u>Term</u>
CLIN 0001 Fuel Services	
Packaging and transportation (base)	May 2011
Fuel qualification (base other than Eurofab)	Jun 2011
Eurofab (base contract)	May 2005
Irradiation services (base)	Jun 2011
Irradiation services (option 1- Mission reactor site modification)	Jun 2011
Depleted Uranium supply	May 2010
Polished Pu supply	
Implementation of Mission Reactors and Site Modifications segment	Dec 2007
BWR Codes and Methods	May 2016
MA4 BWR/PWR Packaging & Transportation	Sept 2016
<u>PWR Codes and Methods</u>	<u>Feb 2017</u>
CLIN 0002 MFFF	
Design Engineering	Jan 10, 2013
Equipment Group Activities	Mar 2, 2010
Option 1 Construction	Oct 14, 2016
CLIN 0003 Option 2 MFFF Operations	
Option 2 Hot Start-up and Operation of the MOX Fuel Fabrication Facility and Reactor Irradiation Services.	TBD
CLIN 0004 Option 3, MFFF Deactivation	
Option 3 Deactivation of the MOX Fuel Fabrication Facility	27 months after Option 3 exercise date.
CLIN 0005 Russian	
	TBD
CLIN 0006 Technology Transfer Agreement	
	Sep 14, 2016

F.2 DELIVERY REQUIREMENTS

The Contractor shall submit to the Contracting Officer the deliverables contained in the following chart by the due date described therein:

BASE CONTRACT

ITEM/ DELIVERABLE	DESCRIPTION	INSPECTION/ ACCEPTANCE CRITERIA	DUE DATE
Advanced Preliminary Design	See Section J.II.A.1.b. (1) Initial Preliminary Design (4) Advanced Preliminary Design	Design addresses requirements of J.II.A.1.a, information requested in description, and is accurate and timely.	See Section J.II.A.1.f.(1)
Final Preliminary Design Packages	See Section J.II.A.1.c.	Design contains all information requested, is accurate and timely.	See Section J.II.A.1.f.(2)
Final Design Packages	See Section J.II.A.1.d.	Design contains all information requested, is accurate and timely.	See Section J.II.A.1.f(3)
MOX Fuel Fabrication Facility Long Lead Time Procurement Plan	See Section J.II.A.2.	Plan contains all information requested, is accurate and timely.	See Section J.II.A.2(b)
Work Task Agreement (WTA)	See Section J.II.A.3	The WTA contains all information requested, is accurate and timely	See Section J.II.A.3(f)
Regulatory Management Plan	See Section J.II.A.5.e (1).	Plan contains all information requested, is accurate and timely.	See Section J.II.A.5(e)(1).
Regulatory Documentation	See Section J.II.A.5.e.(2)	An authorized representative of the contractor shall provide the documentation to DOE.	See Section J.II.A.5(e)(2).
Facility Quality Assurance Plan	See Section J.II.A.6.	Requirements specified in 10 CFR Part 50, Appendix B	See Section J.II.A.6.b.
Construction Market Analysis and Prospective Bidders Report	See Section J.II.A.9.	Report contains all information requested, is accurate and timely.	See Section J.II.A.9.d
Deactivation Plan	See Section J.II.A.10.	Plan contains all information requested, is accurate and timely.	See Section J.II.A.10.c
MOX Fuel Safeguards Plan	See Section J.II.A.11.	Applicable NRC Safeguards Requirements, including applicable IAEA Standards.	See Section J.II.A.11.b.
MOX Fuel Security Plan	See Section J.II.A.12.	Applicable DOE Security Requirements.	See Section J.II.A.12.b

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ITEM/ DELIVERABLE	DESCRIPTION	INSPECTION/ ACCEPTANCE CRITERIA	DUE DATE
Fuel Qualification Plan	See Section J.II.B.2.	Plan contains all information requested, is accurate and timely	See Section J.II.B.2.b.
DOE Host Site Facility(s) Recommendation Report	See Section J.II.B.3.	Report contains all information requested, is accurate and timely.	See Section J.II.B.3.b.
Work Task Agreement	See Section J.II.B.4.	Work Task Agreement contains all information requested, is accurate and timely.	See Section J.II.B.4g.
Certification of Successful Completion of Fuel Qualification Plan	See Section J.II.B.5.	An officer of the contractor shall certify completion.	See Section J.II.B.5.b.
Fuel Qualification Long Lead Time Procurement Plan	See Section J.II.B.6.	Plan contains all information requested, is accurate and timely.	See Section J.II.B.6.b.
Mission Reactors System Modification Plan(s)	See Section J.II.C.1.b.	Plan(s) address requirements of J.II.C.1.a, information requested in description, and are accurate and timely.	See Section J.II.C.1.b.(6)
Mission Reactors Licensing Plan(s)	See Section J.II.C.2.)	Plan(s) contain all information requested, are accurate and timely.	See Section J.II.C.2.d.
Mission Reactors License Amendment Application(s) and Revisions	See Section J.II.C.2.	In accordance with NRC Requirements	See Section J.II.C.2.d (2).
Missions Reactors Permitting Plan(s)	See Section J.II.C.3.	Plan(s) contains all information requested, are accurate and timely.	See Section J.II.C.3.(b)
Mission Reactors Irradiation Plan	See Section J.II.C.4.b.	Plan contains all information requested, is accurate and timely.	See Section J.II.C.4.b.(8)
Project Management Plan	See Section J.II.D..	Plan contains all information requested, is accurate and timely.	See Section J.II.D.1.(4)
SNM Transportation Integration Management Plan	See Section J.II.D.3.a.	Plan contains all information requested, is accurate and timely.	See Section J.II.D.3.a.5
MOX Fresh Fuel Package Certification Plan	Plan covering activities of Section J.II.D.3.b.	Plan contains all information requested, is accurate and timely.	See Section J.II.D.3.b.13

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ITEM/ DELIVERABLE	DESCRIPTION	INSPECTION/ ACCEPTANCE CRITERIA	DUE DATE
MOX Fresh Fuel Package Certificate of Compliance Application	Contractor shall submit the COC application, including package final design and SARP.	Compliance with 10 CFR 71.	See Section J.II.D.3.b.13 (a)
MOX Fresh Fuel Package Procurement Plan	Contractor shall submit a plan with costs and schedule for required fuel packages.	Plan contains all information requested, is accurate and timely.	See Section J.II.D.3(b)13 (b).
Advance Procurement Plan	See Section J.II.D.4.	Plan contains all information requested, is accurate and timely.	See Section J.II.D.4.b

OPTION 1

ITEM/ DELIVERABLE	DESCRIPTION	INSPECTION/ ACCEPTANCE CRITERIA	DUE DATE
Functional and Operability Testing Plan	See Section J.III.G.3.	Plan contains all information requested, is accurate and timely.	See Section J.III.G.3.b.
Certification of Successful Completion of Construction and Cold Start-Up Testing in Accordance with Functional and Operability Testing Plan	See Section J.III.I.1.a	An officer of the contractor shall certify completion.	See Section J.III.I.1.b.
MOX Fuel Fabrication Process Qualification Plan	See Section J.III.G.5.	Plan contains all information requested, is accurate and timely.	See Section J.III.G.5.b
Procedures Management Systems (PMS) Manual	See Section J.III.G.6.	In accordance with the DOE approved PMS manual.	See Section J.III.G.6.d.1.
Vulnerability Assessment	See Section J.III.G.6	In accordance with Section J Applicable Directives	See Section J.III.G.6.d.2
Accreditation of Process and Utility Control System	See Section J.III.G.6	In accordance with Section J Applicable Directives	See Section J.III.G.6.d.3
Financial Project Closeout Report	See Section J.III.G.6	In accordance with Section J Applicable Directives	See Section J.III.G.6.d.4
Lessons Learned Report	See Section J.III.G.6	In accordance with Section J Applicable Directives.	See Section J.III.G.6.d.5

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Estimate at Completion (EAC)	See Section J.III.G.6	EAC accurately considers all known information that can affect the cost at completion	See Section J.III.G.6.d.6
Execution of Nuclear Materials Management Program	See Section J.III.G.8	Comprehensive program is in compliance with applicable requirements in accordance with Section J.III.G.6.	See Section J.III.G.8
Regulatory Management	See Section J.III.G.9	Regulatory Management Plan reflects Contractor's activities in addressing applicable requirements in accordance with Section J.III.G.6.	See Section J.III.G.9
Work Task Agreement (Unexercised Option 1)	See Section J.IV.A.10.	Work Task Agreement contains all information requested, is accurate and timely.	See Section J.IV.A.10.2.
Two-Year MOX Fuel Delivery Schedule (Unexercised Option 1)	See Section J.IV.C.4.	The schedule contains accurate information from all mission reactors.	See Section J.IV.C.4.

OPTION 2

ITEM/ DELIVERABLE	DESCRIPTION	INSPECTION/ ACCEPTANCE CRITERIA	DUE DATE
Certification of Successful Completion of Hot Start-up Testing and Transition to full Operations in Accordance with Functional and Operability Testing Plan	See Section J.V.A.1.	An officer of the contractor shall certify completion.	See Section J.V.A.1.b.
Certification of Completion of the MOX Fuel Fabrication Process Qualification Plan	See Section J.V.A.2.	An officer of the contractor shall certify completion.	See Section J.V.A.2.b.
Deactivation Plan	See Section J.V.A.8.	Plan contains all information requested, is accurate and timely.	See Section J.V.A.8.b.
Work Task Agreement	See Section J.V.A.9.	The Work Task Agreement contains all information requested, is accurate and timely.	See Section J.V.A.9.c.

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Mission Reactors Annual Inventory Report	See Section J.V.C.1.	The report contains accurate information from all mission reactors.	See Section J.V.C.1.d.
Two-Year MOX Fuel Delivery Schedule	See Section J.V.C.2.	The schedule contains accurate information from all mission reactors.	Annually (See Base Contract and Section J.V.C.2.b)

OPTION 3

ITEM/ DELIVERABLE	DESCRIPTION	INSPECTION/ ACCEPTANCE CRITERIA	DUE DATE
Certification of Deactivation Completion	See Section J.VI.A.1	An Officer of the contractor shall certify completion in accordance with the approved Deactivation Plan	Upon completion of deactivation (See Section J.VI.A.1.c.)
Work Task Agreement	See Section J.VI.A.2	The Work Task Agreement contains all requested information, is accurate and timely.	See Section J.VI.A.2.c.

F.3 FAR 52.242-15 STOP-WORK ORDER (AUG 1989) - ALTERNATE I (APR 1984) (APPLICABLE TO BASE CONTRACT AND OPTIONS 1 AND 2)

(a) The Contracting Officer may at any time, by written order to the Contractor, require the Contractor to stop all, or any part, of the work called for by this contract for a period of 90 days after the order is delivered to the Contractor, and for any further period to which the parties may agree. The order shall be specifically identified as a stop-work order issued under this clause. Upon receipt of the order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the order during the period of work stoppage. Within a period of 90 days after a stop work is delivered to the Contractor, or within any extension of that period to which the parties shall have agreed, the Contracting Officer shall either:

- (1) Cancel the stop-work order, or
- (2) Terminate the work covered by the order as provided in the Termination clause of this contract.

(b) If a stop-work order issued under this clause is canceled or the period of the order or any extension thereof expires, the Contractor shall resume work. The Contracting Officer shall make an equitable adjustment in the delivery schedule, the estimated cost, the fee, or a combination thereof, and in any other terms of the contract that may be affected and the contract shall be modified, in writing, accordingly, if -

- 1) The stop-work order results in an increase in the time required for, or in the Contractor's cost properly allocable to, the performance of any part of this contract; and
- 2) The Contractor asserts its right to the adjustment within 30 days after the end of the period of work stoppage; provided that, if the Contracting Officer decides the facts justify the action, the Contracting Officer may receive and act upon the claim submitted at any time before final payment under this contract.

(c) If a stop-work order is not canceled and the work covered by the order is terminated for the convenience of the Government, the Contracting Officer shall allow reasonable costs resulting from the stop-work order in arriving at the termination settlement.

INTRODUCTION

This document addresses the administration of the incentive based fees for Contract Number DE-AC02-99CH10888, with Shaw AREVA MOX Services, LLC (MOX Services).

Incentive Fee as used in this Plan generically means all three types of incentives discussed in this Plan: Cost/Schedule; Milestone Completion; and Cost Sharing unless a particular section of this Plan specifically limits the phrase "Incentive Fee" to one of the three fee types.

This document serves as the Incentive/Milestone Fee Plan (contemplated by the Contract Clause in Section B entitled, FIXED, AWARD, MILESTONE AND INCENTIVE FEES AND COST SHARE). Implementation of Award Fee is detailed in a separate Award Fee plan and is not covered by this document. The Government may make unilateral changes in this document. However, any such unilateral changes may entitle the contractor to request an equitable adjustment under the terms of the contract.

PURPOSE

The Plan is written to provide a general overview of the contract, identify the specific fee incentives under the contract, and provide information, guidance and processes for management and administration of the Incentive Fee plan by the Government staff.

The Mixed-Oxide Fuel Fabrication Facility construction project is long term in nature and employs the use of Contractor cost and schedule performance to determine Incentive Fee earned. These performance incentives represent the primary objectives for the Government and the work that is most important to be performed.

CONTRACT SUMMARY

The estimated cost of the contract and total available fee are set forth in the Section B of the contract.

The fee earned and payable will be determined by the Government with input by the Contractor. The final fee determinations will be based upon the contractor's performance in relation to the performance incentive objectives as outlined in this plan and the other requirements of the contract.

1. COST/SCHEDULE INCENTIVE FEE: The total amount of available Cost/Schedule incentive fee is detailed in Section B, Clause B.3, paragraph (b)(1)(i). of the contract.
2. MILESTONE FEE: - The total amount of available Milestone fee is detailed in Section B, Clause B.3, paragraph (b)(3).
3. COLLATERAL SAVINGS/COST SHARE – The maximum amount of savings that Contractor may receive and the maximum liability the Contractor will contribute to cost is detailed in Section B, Clause B. 4.
4. TARGET COST – The target cost is used for measuring performance under Cost/Schedule Incentive and is the value of CLIN 0002, Mixed Oxide Fuel Fabrication Facility.
5. ADJUSTED TOTAL PROJECT COST – The adjusted total project cost is used for measuring performance under the Cost/Share Incentive as detailed in Section B.4.
6. GENERAL DESCRIPTION OF INCENTIVES
The performance requirements covered by the incentives are generally described in Section B of the contract with the detailed requirements defined herein.

A. COST/SCHEDULE INCENTIVE

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The Cost/Schedule incentive is a single comprehensive incentive for performance of the CLIN 002 activities below the established cost and schedule baseline (See F.1). CLIN 0002 shall be adjusted as necessary to account of changes to the prime contract.

The basis for measurement will be quarterly provisional fee payments for maintaining the project cost and schedule within below the band identified in Attachment 1, Incentive Fee Band.

Cost/Schedule Incentive Provisional Quarterly Fee

Cost/Schedule Incentive Fee shall be paid on a quarterly basis provided the Contractor is projected to be below the total estimated Cost of CLIN 002, and schedule as defined in sections B.3 and F.1 respectively. The total estimated cost of CLIN 002 is hereafter referred to as the Target Cost. To recognize normal fluctuations, an Incentive Fee Band has been established.

For the purposes of determining the value of the Cost/Schedule Incentive Fee, the Contractor's cost and schedule performance will be evaluated by the Government with input from the Contractor. In making its determination, the Government will use Earned Value Management Reports, the Contractor's use of Management Reserve and/or Government Contingency, schedule float, trends, variance at completion, interim project milestones, the annual Estimate at Completion, and other relevant and factual information supplied by the Contractor.

If the projected EAC exceeds the Target Cost, but does not exceed the Target Cost by more than the amount listed in the Incentive Fee Band, then the Government will consider the Contractor to be within projected costs. If the projected schedule exceeds the date listed clause F.1, but by no more than the additional time provided in the Incentive Fee Band, then the Government will consider the Contractor to be within schedule. The foregoing adjustment to cost and schedule applies to all aspects of the payment of Incentive Fee, including suspension of payments and resumption of payments.

If the Contractor's projected cost or schedule is outside the Incentive Fee Band, then the Contractor shall not invoice for the quarterly Incentive Fee payment. If invoiced in error, the Government shall not approve payment of the invoice. All quarterly Incentive Fee payments will be suspended until performance improves and the projected cost and schedule are back below the target cost and schedule band. Previously paid out Incentive Fee that is provisional at the time payments are suspended shall remain provisional until payments resume.

When the target cost and schedule are once again within the Incentive Fee Band, payments of quarterly Incentive Fee will resume. Additionally, all suspended quarterly payments may be invoiced. Once suspended Incentive Fee payments are paid, the payments will be treated as if payments were made as originally scheduled when determining what Incentive Fee is provisional and what is final.

The Contracting Officer will provide the contractor a written statement explaining the decision to withhold any incentive payments.

Provisional Cost/Schedule Incentive Fee Converting to Final Fee

The distinction between provisional and final is operative only for determining the amount of fee that is subject to cost overrun sharing as described by the Cost/Share Incentive Fee section (see C. COST/SHARE INCENTIVE below).

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All (100%) Cost/Schedule Incentive Fee payments remain provisional for one (1) year and 50% of the provisional fee will become final after one (1) year provided that for each of the 4 previous quarters, cost and schedule performance met the applicable band in Attachment 1. See Attachment 2, Provisional Fee Payments for an illustration of this process.

Previously invoiced fee that has met the requirement to be classified as final cannot be reclassified as provisional.

Final Cost/Schedule Incentive Fee Payment Determination

At project completion, defined as the submittal and acceptance of the CD-4 package, all provisional payments convert to final payments provided the project cost at completion is less than or equal to the Adjusted TPC.

B. MILESTONE FEE

The Milestone Fee is an incentive for meeting key milestone dates in the construction schedule. In general, the goal of this milestone incentive is to identify milestones that could be incentivized to help ensure success of the project during construction, as well as provide a high degree of certainty that the MOX facility would be completed within project baseline schedule and perform as designed. The selected milestones are identified in Attachment 3, Milestone Schedule.

The basis for measurement will be the 11 milestone activities as identified in Attachment 3, Milestone Schedule. All Milestone Fee payments for meeting established milestone dates are considered final. For the Milestone Fee to be paid, the milestone activities identified in Attachment 3 must be fully met on or before the date specified in the milestone schedule and accepted by the Government. If a milestone listed in Attachment 3 is missed, the fee for that activity will roll to the final milestone on the milestone schedule. If the final milestone (Complete Cold Start-up) is completed on or before the established milestone due date and accepted by the Government, that Milestone Fee as well as all Milestone Fee payments not previously paid because of failure to meet dates specified in Attachment 3 will be made provided the project is within the adjusted TPC and the current approved schedule baseline. Acceptance shall be in accordance with any requirements delineated in individual milestone documentation/schedules, if any, and not unreasonably withheld.

C. COLLATERAL SAVINGS/COST SHARE

The Collateral Savings/Cost Share is the method used to incentivize project completion below the adjusted TPC. If the total allowable, final project costs are less than the adjusted TPC, the contractor shall earn 25 cents for every dollar under the adjusted TPC. If the total allowable, final project costs exceed the adjusted TPC, the contractor shall owe 25 cents for every dollar over the adjusted TPC. The Contractor's share of savings under this Paragraph is capped at \$200,000,000, which is in addition to fees calculated under Paragraphs A. and B. above. Cost overrun remittance is capped at remaining provisional fee, as computed per Paragraph A. above.

The Contractor's share of savings, if earned, will be paid in a single payment after final costs have been determined. For the purposes of determining the cost share, the adjusted Total Project Cost (TPC) as defined in clause B.3 of the contract will be used. As contemplated by FAR 52.216-10, INCENTIVE FEE (MAR 1997) SECTION (e)(4), the costs of catastrophic, unusually hazardous, or other Force Majeure events, while allowable project costs, will not be included in the calculation for determining shared costs savings as set forth in Section B.3 (c)(i) of the contract and section C of this document.

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The adjusted TPC includes the following categories of cost and cost accounts used to track the incurred costs:

CA	Description
0901	DOE/WSRC Support
0902	DOE/WSRC Support
1508	Electrical Sys & Components
6001	Communications
6038	Facility Management
8141	Project Environmental Safety and Health - ES&H Program
8785	Process Assembly Facilities
7410	Misellaneous Procured Services
7415	Concrete Batch Plant
7417	Non-Destructive Test Services
7416	Independent Test lab Services
8820	Onsite - Supplies and Services
	Onsite - Office Equipment & Furniture Leases & Purchases
8821	
8832	Buildings/Shops/Trailers
8833	Temporary Utilities & Services
8840	Equipment
8842	Construction Materials Management
8850	Misc Field Construction Supplies
2101	Site Preparation
2202	F - Road
4100	Building Structure
5100	Building Structure
6100	BUILDING STRUCTURE
	History
5427	Engineering Support to Licensing - Nuclear Safety
6032	Project Group Training
1508	Electrical Sys & Components
4101	SNM Transportation Integration Plan
6601	Contracts
7417	Non-Destructive Test Services

7. FINAL INCENTIVE FEE PAYMENT

The final incentive fee determination will be calculated by the CO subsequent to the end of the final evaluation period, i.e., September 2016 (if that date is not extended). The final incentive fee determination will be based on the total allowable, final project costs for the physical completion and acceptance of the MFFF the work scope defined by CLIN 0002. The costs shall be calculated using the Contractor's approved Earned Value Management System and the results of any Government audits.

The final incentive fee payment will be based upon overall progress and will reflect the difference between the final incentive fee determination and the sum of quarterly provisional incentive fee payments made during the period of the contract, subject to the maximum fee amounts in Section B and this plan. If the sum of quarterly provisional incentive fee payments made during the period of the contract is greater than the overall fee that is calculated by the CO in his/her final incentive

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fee determination, the contractor shall reimburse the amount of fee already paid that is greater than the amount of fee earned.

The final incentive fee payment shall be limited by the Maximum amount of Fee available in Section B, subject to the contractor's achievement of the minimum performance requirements and threshold requirements of this plan.

8. INVOICING

Once the final fee payment amount has been determined and agreed upon by the Contracting officer a contract modification will be issued and the contractor may invoice any earned fee payments. Payment will be made by the payment office within 14 days after receipt of a proper invoice.

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ATTACHMENT 1 **PROJECT/COST INCENTIVE FEE BAND & SCHEDULE**

Incentive Fee Band

	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013*	FY2014*	FY2015*	FY2016*
Cost in Dollars	200,000,000	200,000,000	200,000,000	200,000,000	200,000,000	150,000,000	100,000,000	50,000,000	0
Schedule	6 months	6 months	6 months	6 months	6 months	6 months	6 months	3 months	

Incentive Fee Amounts by FY (6.75% Fee Schedule)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
Incentive Amount in Dollars	3,000,000	12,000,000	14,100,000	15,400,000	13,100,000	8,000,000	7,262,871	4,000,000	0	76,862,871

As detailed in clause H.29 (g) of the contract, the 7% fee schedule detailed below will be effective with the execution of a contract modification adding hot start to the contract.

Incentive Fee Amounts by FY (7% Fee Schedule)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
Incentive Amount in Dollars	3,000,000	12,000,000	14,100,000	15,400,000	14,500,000	9,500,000	8,490,019	5,000,000	0	81,990,019

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ATTACHMENT 2 PROVISIONAL INCENTIVE FEE

Provisional Payment Schedule Illustration

Time>	year n Q1	year n Q2	year n Q3	year n Q4	year n+1 Q1	year n+1 Q2	year n+1 Q3	year n+1 Q4	year n+2 Q1	year n+2 Q2	year n+2 Q3	year n+2 Q4
	EAC				EAC				EAC			
invoice date												
year n Q1	100%	100%	100%	100%	50%	50%	50%	50%	50%	50%	50%	50%
year n Q2		100%	100%	100%	100%	50%	50%	50%	50%	50%	50%	50%
year n Q3			100%	100%	100%	100%	50%	50%	50%	50%	50%	50%
year n Q4				100%	100%	100%	100%	50%	50%	50%	50%	50%
year n+1 Q1					100%	100%	100%	100%	50%	50%	50%	50%
year n+1 Q2						100%	100%	100%	100%	50%	50%	50%
year n+1 Q3							100%	100%	100%	100%	50%	50%
year n+1 Q4								100%	100%	100%	100%	50%
year n+2 Q1									100%	100%	100%	100%
year n+2 Q2										100%	100%	100%
year n+2 Q3											100%	100%
year n+2 Q4												100%